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GIFT OF

New Jersey Public Utility Commissioners

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*Mr. March succeeded Mr. Treacy, whose term expired May 1st, 1917.

G.

cf

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No. 395.

**IN THE MATTER OF THE PETITION OF THE TOWNSHIP OF EWING
FOR ALTERATION OF GRADE CROSSING AT ASYLUM TURN-
PIKE-PHILADELPHIA AND READING RAILWAY.**

ORDER.

Linton Satterthwaite and Frank S. Katzenbach, for petitioner.

W. L. Kinter and Malcolm G. Buchanan, for respondent.

By petition filed with the Board, the Township Committee of the Township of Ewing, in the County of Mercer, stated that the Township Committee is the body having charge of the finances of the township and that a public highway in said township, leading from the City of Trenton to the Village of Trenton Junction, and commonly known as the Asylum Turnpike, crosses the railway tracks and right of way of the Delaware and Bound Brook Railroad Company, Philadelphia and Reading Railway Company, lessee, in said township, southwesterly of and near the Trenton Junction station of the said railway company. It was alleged by the petitioner that the crossing of the highway over the railroad at grade is dangerous to public safety and that public travel on the highway is greatly impeded by reason of said grade crossing. A copy of this petition was served on the Philadelphia and Reading Railway Company which filed its answer thereto.

The Board fixed a time and place for hearing on the petition of the township and gave the notice, required by law, to the parties in interest of said hearing.

Such hearing having been held and it appearing to the Board that the crossing of the public highway known as Asylum road, in the Township of Ewing, County of Mercer, and the railroad of the Delaware and Bound Brook Railroad Company, is dangerous to public safety, that the public travel on such highway is impeded thereby, that the Philadelphia and Reading Railway Company is operating the said railroad, and that said crossing should be altered according to a plan approved by this Board and such plan having been approved,

Alteration of Grade Crossing. P. & R. Ry. Co.

NOW, THEREFORE, it is ORDERED, and the said Board of Public Utility Commissioners, by virtue of the powers and authority vested in it by Chapter 57 of the Laws of 1913 of the Legislature of this State,

DOES HEREBY ORDER the Philadelphia and Reading Railway Company to alter such crossing, according to the plan annexed to this order and marked

"Philadelphia & Reading Railway Co. Plan Showing Proposed Avoidance of Grade Crossing at Asylum Road West of Trenton Jct., N. J. Adopted by the Conference of All Interested Authorities at Trenton, N. J., Dec. 21, 1915,"

which said plan is hereby approved by said Board and by reference thereto herein made part hereof, by substituting therefor a crossing not at the grade of such public highway, by relocating and carrying such public highway under the said railroad according to and as shown on said plan for said purpose. Any telegraph, telephone, gas, electric lighting, power, water, oil, pipe line or other company, corporation, co-partnership or individual whose property or construction it may be necessary to change or remove to carry said plan and this order into effect, shall remove and change the same according to said plan, and it is,

FURTHER ORDERED, that the said Delaware and Bound Brook Railroad Company, Philadelphia and Reading Railway Company, the Township Committee of the Township of Ewing, and the Board of Chosen Freeholders of the County of Mercer, and all other parties to this proceeding, and each and every one of them, proceed with due diligence to the execution of this order and comply with all the requirements thereof and the duties imposed upon them hereby, and by the law under which this order is made, and the laws of this State, and to that end they and each of them exercise in good faith all of the powers conferred upon them and each or any of them by the laws of this State; and it is

FURTHER ORDERED, that the said Philadelphia and Reading Railway Company shall perform and fully comply with the directions and requirements of this order and complete all the work required thereunder to be done within ten months from the effective date of this order.

John Johnstone vs. Hackensack Water Co.

It appearing that in relocating the public highway as required by this order it will be necessary for such public highway to be constructed upon land belonging to the State of New Jersey for which permission of the State by legislative act must be given, and it further appearing that no objection will be made to the use of the State land as proposed, but that such use will be urged by and on behalf of the public authorities having custody of said land as being in the public interest, and that by the exercise of reasonable diligence legislative sanction for such use may be obtained not later than February sixth, one thousand nine hundred and seventeen, the said date of February sixth, one thousand nine hundred and seventeen is hereby made the effective date of this order.

Dated January 9th, 1917.

No. 396.

JOHN JOHNSTONE

VS.

HACKENSACK WATER COMPANY.

The Board finds a desired extension of utility service would be reasonable and practicable and would furnish sufficient business to justify the construction and maintenance of the same. In order that the utility may be assured of such sufficient business, petitioners are required to furnish a guaranty that the annual income of the company from the consumers residing along the line thereof should amount to at least \$1,577 in each year for a period of five years.

William M. Seufert, for petitioner.

B. E. Budds, for Palisade Park.

W. M. Wherry, for the company.

 John Johnstone vs. Hackensack Water Co.

Repeated requests have been made to the Hackensack Water Company, since the year 1905, to extend its mains in the Palisade Park section of Bergen County, but with no result. The present investigation was started on complaint of John Johnstone, who desires the company to extend its mains from Anderson Avenue as follows:

On Central Boulevard from Central Avenue westward to 10th Street.	2,450 ft.
On 10th Street from Central Boulevard northward to Palisade Boulevard	636 "
On Palisade Boulevard from 10th Street westward to 7th Street....	750 "
On 7th Street from Palisade Boulevard southward to Homestead Avenue	1,700 "
On 13th Street from Central Boulevard southward to Homestead Avenue	1,050 "
On 11th Street from Central Boulevard southward to Brinkerhoff Avenue	525 "
On 8th Street from Brinkerhoff Avenue southward to Homestead Avenue	525 "
On Brinkerhoff Avenue from 7th Street eastward to 8th Street....	250 "
	<hr/> 7,885 "

There are about ninety-eight houses which might be served from these extensions and seventy-eight owners of these have joined in a request to the company for the said extensions.

Conferences and correspondence were kept up actively between the company and those desiring the water mains extended, during the years 1911, 1914 and 1915, with the hope that an amicable arrangement could be reached. In February, 1915, the superintendent of the water company addressed a letter to Mr. Johnstone in which he stated:

"We have not as yet given any consideration to the subject of spring extensions, and as the affairs of the water company are now being investigated by the Public Utility Commission, which has been brought about by complaints having been made from different parts of the territory, to the effect that the water company are undertaking to supply a larger population than we have capacity for serving, I am inclined to think the subject of extensions for the coming year will go slow or until such time as the report regarding the subject is made by the Public Utility Commission."

The letter is a mere pretext for further delay. There is not now and never has been before this Board any matter which would

John Johnstone vs. Hackensack Water Co.

in anywise retard or discourage the extensions spoken of, had the company shown any inclination to make the same.

No claim is made by the company that the desired extension is not reasonable and practicable, nor that its financial condition will not reasonably warrant the expenditure required in making and operating the same. Its answer alleges that to reach twenty-eight of the signers of the petition would require a further extension of 4,845 feet. We are dealing now with the specific requests for extensions above definitely set forth which involve 7,885 feet of new construction and what return may be realized on the necessary capital expenditure.

Next it says it does not believe that the grades of all the streets in which extension has been asked for have been established, but at the hearing it was shown that grades had been established and that in only one place was it desirable, but not necessary, that the grade of one street should be changed. Where street grades have been regularly established by the proper legal authorities, it is hardly a good answer for a utility to say that it prefers or insists on some other grade before it will serve applicants for service.

At the hearing, although not contained in the answer, the company suggested it be allowed an annual guaranty of \$2,372.96 if the extension is ordered.

The engineer for the Commission and the superintendent of the water company agree that \$1.50 per lineal foot is a fair amount to allow for such rock excavations as are necessary for this region of the State. It was the unit agreed upon in the appraisal of the Hackensack Water Company before this Board and is ample. It is the practice of the Hackensack Water Company and many others in making extensions under usual conditions, in cases where the estimated cost of service is greater than the estimated revenue, to demand yearly revenue from the consumers who can be served of ten cents per lineal foot of pipe laid. It has laid its mains west of Anderson Avenue, in the trap rock region known as the Palisades, on the guaranty of a sum not greater than fifteen cents a foot. This formation is "just about the same as it is all through Central Boulevard." It appears from the testimony that there would be approximately thirty-six per cent. rock excavation in the

John Johnstone vs. Hackensack Water Co.

proposed extension, and for that reason we estimate the cost to be \$1.50 per lineal foot of six-inch pipe there laid. This is allowing double the average cost of similar extensions for the reasons just stated.

On this basis, the estimated cost of furnishing and laying the pipe would be \$11,827.50. An annual revenue of twenty cents per lineal foot of pipe for 7,885 feet would be \$1,577, or a return of thirteen and one-third per cent. on the actual outlay for the construction. The credit of the company is so good that it can borrow on its bonds at a rate of four and one-half per cent. and five per cent. interest per annum. This leaves approximately \$1,000 to the company for the water consumed, which includes operating expenses, overhead charges, etc., and a return to the stockholders on the capital invested.

It is evident from the testimony and the exhibits that the vicinity in which these extensions are desired is built up of modest homes, inhabited largely by working people. For this reason, the company contended that it ought not to be required to make extensions, because the return will not be as great as in the case of more pretentious homes. Perhaps there would not be as large an immediate return as the company desires, but the people need water just as badly as the more prosperous, and the utility ought to furnish the service just as willingly to them as to the more prosperous, so long as it receives a fair return on the capital invested for their benefit. This is its plain duty.

After a careful study of the whole problem we conclude that the extension specified is reasonable and practicable and will furnish sufficient business to justify the construction and maintenance of the same. In order that the company may be assured of such sufficient business, we will require the petitioners to furnish a guaranty that the annual income of the company from the consumers residing along the line thereof should amount to at least \$1,577 in each year for the period of five years. The financial condition of the Hackensack Water Company is admitted to be good and from its reports filed with this Commission its credit is of a high order.

The Board of Public Utility Commissioners therefore finds that the conditions required by Section 17, Subdivision (c) of Chapter 195 of Laws of 1911, have been established, and will

John Johnstone *vs.* Hackensack Water Co.

ORDER the Hackensack Water Company to extend its mains from Anderson Avenue as follows: On Central Boulevard from Central Avenue westward to 10th Street, 2,450 ft.; on 10th Street from Central Boulevard northward to Palisade Boulevard, 635 ft.; on Palisade Boulevard from 10th Street westward to 7th Street, 750 ft.; on 7th Street from Palisade Boulevard southward to Homestead Avenue, 1,700 ft.; on 13th Street from Central Boulevard southward to Homestead Avenue, 1,050 ft.; on 11th Street from Central Boulevard southward to Brinkerhoff Avenue, 525 ft.; on 8th Street from Brinkerhoff Avenue southward to Homestead Avenue, 550 ft.; on Brinkerhoff Avenue from 7th Street eastward to 8th Street, 250 ft., within four months after contracts returning annual revenue of at least \$1,577 for five years (including any fire hydrants which may be established along the line of said proposed extension) have been tendered to said company.

Dated January 15, 1917.

ORDER.

This case being at issue upon complaint and answer on file and having been duly heard and submitted by the parties and full investigation of the matters and things involved having been had, and the Commission having, on the date hereof, made and filed a report containing its findings of fact and conclusions thereon, which said report is hereby referred to and made a part hereof,

IT IS ORDERED that the Hackensack Water Company extend its mains from Anderson Avenue as follows: On Central Boulevard from Central Avenue westward to 10th Street, 2,450 feet; on 10th Street from Central Boulevard northward to Palisade Boulevard, 635 feet; on Palisade Boulevard from 10th Street westward to 7th Street, 750 feet; on 7th Street from Palisade Boulevard southward to Homestead Avenue, 1,700 feet; on 13th Street from Central Boulevard southward to Homestead Avenue, 1,050 feet; on 11th Street from Central Boulevard southward to Brinkerhoff Avenue, 525 feet; on 8th Street from Brinkerhoff Avenue southward to Homestead

George A. Marr vs. Point Pleasant Water Works Co.

Avenue, 550 feet; on Brinkerhoff Avenue from 7th Street eastward to 8th Street, 250 feet, within four months after contracts returning annual revenue of at least one thousand five hundred and seventy-seven dollars for five years (including any fire hydrants which may be established along the line of said proposed extension) have been tendered to it.

This Order shall become effective February 6, 1917.

Dated January 15, 1917.

No. 397.

GEORGE A. MARR

VS.

POINT PLEASANT WATER WORKS CO.

1. Following investigation of a complaint of an excessive charge for water billed on a flat rate basis, the Board finds the premises to be such that unusual conditions prevail and that metered service would be reasonable.

2. If the complainant desires and gives reasonable notice to the company requesting the installation of a meter, the Board will order the same should the company refuse it.

Joseph Mayer, for the company.

George A. Marr filed an informal complaint with this Board stating that he was charged a flat rate of \$47.50 per annum for water service at his cottage in Point Pleasant; that at his home in Swarthmore, Pa., he had about the same number of fixtures and was charged \$18.00 per annum; further, that he had installed a meter at his Point Pleasant home, at his own expense, but the company refused to recognize his right so to do, and at present charges him at the fixture rates.

George A. Marr vs. Point Pleasant Water Works Co.

The bill presented by the water company to Mr. Marr for service from November 1, 1916, for water rent to November 1, 1917, is made up on the following schedule:

3 first' faucets (sink).....	\$12.50
2 basins	4.50
2 water closets	6.50
2 baths	4.50
3 wash tubs	4.00
2 hose attachments	8.50
1 additional faucet fountain.....	2.50
2 additional faucets showers.....	4.50
	<hr/>
	\$47.50

The first charge "3 first faucets (sink) \$12.50," should read "first faucet, \$7.50; 2 additional faucets \$2.50 each, total \$12.50." The above charges are the uniform fixture charges of the company in accordance with its schedule filed with this Commission.

The matter was set for hearing and witnesses produced. The amount of Mr. Marr's bill and the company's refusal to render him metered service are admitted.

From the testimony of the witnesses it appears that Mr. Marr has complained of his water bills for several years. His premises consist of a large three-story house with a garage in the rear, capable of holding two cars. He rents this property during the summer season and the tenant uses it as a boarding house. Five or more persons are employed in help and the week-end guests or boarders vary from fifteen to twenty.

In 1914 a meter was installed at this residence and the metered service amounted to considerably more than the flat rate charge. Mr. Marr took the meter to Swarthmore when he left the Point Pleasant house, had it tested and found the meter registered within the allowable limits of accuracy.

Mr. Marr was requested by the company to turn over the water meter and the company offered to refund the amount paid by him for it. He declined to accede to the request. On being billed for \$66.30 for the metered service, as registered, he paid the same in two payments of \$7.50 and \$43.82 and subsequently returned the meter for which he was allowed \$15.00. This settled the

George A. Marr vs. Point Pleasant Water Works Co.

account. Mr. Marr in his letter to the company states, "I am convinced, however, that there is something radically wrong—just where I am unable to say."

After the demonstrated accuracy of the meter and the increased cost to Mr. Marr of water service on the metered basis, it is apparent that the fault is with his tenant or her servants. It is not uncommon, in fact it frequently happens, that tenants who are not obligated to pay for the water service, are careless and extravagant in the use of it.

In the case of *Heisley vs. The Tintern Manor Water Company* (Pg. 170, Vol. 1, Reports Board of Public Utility Commissioners), this Board laid down the rule that meters should be installed "for all hotels, large boarding houses, saloons, laundries, bathing establishments, stock farms, liveries, boarding stables, garages, greenhouses, and all commercial and manufacturing establishments, and residences where unusual conditions of use prevail."

We conclude from the evidence that the premises in question are so used as to be classified within the rule just recited. If the complainant desires and gives reasonable notice to the company requesting the installation of a meter, this Board will make an order to secure such metered service, should the company decline to make the installation. It must nevertheless be understood that if such meter be installed it will be by the company, under its control, and that Mr. Marr will not be permitted, at his pleasure should he find his water rates increased by such measurements, to return to the flat rate charge, without the company's consent.

There was no evidence submitted tending to prove the rates charged by the company to be excessive or unreasonable. That question would involve an inventory and appraisalment of the company's property used and useful in the water service and could not be undertaken in this informal proceeding.

Dated January 30, 1917.

New Crossing at Grade, Wright Street, Pleasantville.

No. 398.**IN THE MATTER OF THE APPLICATION OF THE CITY OF PLEASANTVILLE FOR PERMISSION TO CONSTRUCT WRIGHT STREET, IN SAID CITY, AT GRADE ACROSS THE TRACKS OF WEST JERSEY AND SEASHORE RAILROAD COMPANY.**

Application for permission to construct new crossing at grade denied, with the recommendation that the municipality consider construction of a street paralleling the tracks.

Elwood C. Weeks, for the petitioner.

George A. Bourgeois, for the respondent company.

The City of Pleasantville filed a petition to extend Wright Street across the tracks of West Jersey and Seashore Railroad Company at grade.

Hearing was held at the State House, Trenton, at which the only witness for petitioner was Mr. S. J. Clark, the City Engineer, who testified to physical conditions and the number of houses now located near the proposed crossing.

It appears that there are five houses on Wright Street on the westerly side of the railroad tracks and within three hundred feet of it, the occupants of which would be somewhat inconvenienced by the establishment of a crossing at that street. There is a crossing at Bayview Avenue, four hundred and six feet to the south of Wright Street. There is a crossing at Decatur Avenue, five hundred and eighty-five feet to the north of Wright Street. The territory in the neighborhood of the proposed crossing is sparsely settled and is just now being developed. There was no testimony to show that the crossing is necessary to the needs of the community.

There is a cross street, leading to Bayview Avenue on the one side and Decatur Avenue on the other side of Wright Street, located not more than two hundred feet west from the railroad

New Crossing at Grade, Glendale Avenue, Pleasantville.

tracks, so that no one could be required to go a great distance to get across the tracks.

It is RECOMMENDED that the municipality give consideration to the suggestion discussed at the hearing that a street paralleling the tracks be constructed to serve the future development of the community.

From the proofs before us we are unable to conclude that public necessity requires the crossing at Wright Street at the present time. We, therefore, are obliged to withhold approval. The application will be dismissed. An order will so enter.

Dated January 30th, 1917.

ORDER.

This application having been duly heard and the Board having, on the date hereof, made and filed a report containing its findings of fact and conclusions thereon, which said report is hereby referred to and made a part hereof, the Board's approval of this application is withheld and the same is HEREBY DISMISSED.

Dated January 30th, 1917.

No. 399.

IN THE MATTER OF THE APPLICATION OF THE CITY OF PLEASANT-
VILLE FOR PERMISSION TO CONSTRUCT GLENDALE AVENUE
ACROSS THE TRACKS OF WEST JERSEY AND SEASHORE RAIL-
ROAD AT GRADE.

Application for permission to construct a new crossing at grade is denied, there appearing to be no present need for the same.

Elwood C. Weeks, for the petitioner.

George A. Bourgeois, for the respondent company.

New Crossing at Grade, Glendale Avenue, Pleasantville.

Application was made by the City of Pleasantville for permission to extend Glendale Avenue across the tracks of West Jersey and Seashore Railroad Company at grade.

In *Ocean City vs. Atlantic City Railroad Company*, Vol. 3, Reports of the Board of Public Utility Commissioners of the State of New Jersey, p. 372, the Board said:

"The policy of the State is expressed in legislation looking to the elimination of existing grade crossings and the avoidance of additional grade crossings unless they are required by public necessity. The Board has uniformly declined to grant approval for the creation of additional grade crossings unless it appears that the development of the community will be retarded by such refusal and that such crossing is required by public necessity."

The City Engineer, Mr. S. J. Clark, testified for the city and merely established the location of houses and the relation of streets to the tracks.

There are eight houses on Glendale Avenue between the tracks and First Street. It might be some advantage to the occupants of these houses to have the new crossing.

Inasmuch, however, as they can, by the use of a street located only a few hundred feet west of the tracks, have access to Shadeland Avenue, three hundred feet to the north, and to Tremont, three hundred feet to the south, both of which now cross the tracks, they do not seem to be unduly inconvenienced.

No necessity has been shown for a third crossing within a distance of six hundred feet, as would be the case if this application were granted. We think no present need appears for this crossing. The application therefore will be dismissed. An order will so enter.

Dated January 30th, 1917.

ORDER.

This application having been duly heard and the Board having, on the date hereof, made and filed a report containing its findings of fact and conclusions thereon, which said report is hereby referred to and made a part hereof, the Board's approval of this application is withheld and the same is HEREBY DISMISSED.

Dated January 30th, 1917.

Change of Location—P. R. R. Station, Princeton.

No. 400.

IN THE MATTER OF THE APPLICATION OF THE PENNSYLVANIA RAILROAD COMPANY, LESSEE OF THE UNITED NEW JERSEY RAILROAD AND CANAL COMPANY, FOR PERMISSION TO CHANGE THE LOCATION OF ITS PASSENGER STATION AT PRINCETON, NEW JERSEY.

Application being made to the Board of Public Utility Commissioners, by The Pennsylvania Railroad Company, Lessee of The United New Jersey Railroad and Canal Company, by petition in writing, for permission to change the location of its passenger station at Princeton, New Jersey, to a point about one thousand feet south of the site of the present station in said Borough of Princeton, more particularly shown by means of a blueprint annexed to said petition, which petition and blueprint, by reference thereto herein, are made part hereof.

The Board of Public Utility Commissioners, after hearing and investigation, no reason to the contrary appearing,

HEREBY GRANTS its permission to change the location of said passenger station at Princeton, New Jersey, to a point about one thousand feet south of the site of the present station, as prayed for in said petition.

Dated February 6th, 1917.

No. 401.

IN THE MATTER OF ESTABLISHING STANDARDS AND REGULATIONS, TO BE FOLLOWED BY UTILITIES SUPPLYING WATER FOR PUBLIC USE.

S. W. Borden, C. P. Bassett and F. C. Kimball for Lakewood Water Co.;
F. C. Kimball and C. P. Bassett for Commonwealth Water Co.; F. V.

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Pitney for Morris Aqueduct Co.; C. K. Corbin for Bergen Aqueduct Co., Bergen Water Co., and Glen Rock Water Co., Inc.; G. B. Cade, J. G. Campbell and A. S. Henderson for New Jersey Water and Light Co.; Wellington LaMonte for Tintern Manor Water Co.; W. C. Jones for Delaware River Water Co.; A. W. Cuddeback for Passaic Water Co., Acquackanonk Water Co., Montclair Water Co., Little Falls Water Co., and Butler Water Co.; H. L. Boissevain for Monroe Water Co.; E. E. Carlyle for Rumson Improvement Co.; J. H. Forsythe for Stockton Water Co.; T. Y. Smith for General Water Supply Co.; A. C. Doller for Egg Harbor Water Co.; M. W. Pharo for Woolwich Water Co., Tuckerton Water Co. and Jamesburg Water Co.; A. Mundy for Middlesex Water Co.; C. G. Justice for Glen Lake Water Plant; S. A. Applegate for Toms River Water Co.; William Curry for Shark River Water Co.; H. D. Eldridge for Princeton Water Co.; W. H. Roth for Monmouth Water Co.; B. G. Hall for Paulsboro Water Co.; M. D. Rudderow for Merchantville Water Co.; S. J. Franklin for Millville Water Co.; T. E. DeYoe for Sea Isle City Water Co.; E. H. Smith and T. J. Grayson for New Jersey Water Service Co.; C. F. Sheppard for Clementon Springs Water Co.; R. W. Edwards for Ocean City Water Co.; Joseph Mayer for Point Pleasant Water Works Co.; W. I. Mason for Bound Brook Water Co.; E. H. Hill for Maple Shade Water Co.; A. B. Allen for Flemington Water Co.; E. J. Neighbor for German Valley Water Co.; S. F. Sharp for Pennington Spring Water Co.; E. F. H. Reeve for Mount Holly Water Co.; J. W. Whelan and J. H. Townley for Elizabethtown Water Co., Raritan Water Co. and Piscataway Water Co.; H. R. Cook for Watchung Water Co.; W. J. Whelan for Plainfield Union Water Co.; D. O. French, W. M. Wherry and H. L. DeForest for Hackensack Water Co.; G. G. Stryker for Peoples Water Co.; A. H. Kean for Camden-Glassboro Water Co.; S. D. Williams for Township of South Orange; A. Potter for Town of Irvington; William C. Asper for Town of Weehawken.

By section 16 of Chapter 195, Laws of 1911, the Board has power:

“(e) After hearing, by order in writing, to fix just and reasonable standards, classifications, regulations, practices, measurements or service to be furnished, imposed, observed and followed thereafter by any public utility as herein defined.

“(f) After hearing, by order in writing, to ascertain and fix adequate and serviceable standards for the measurement of quantity, quality, pressure, initial voltage or other condition pertaining to the supply of the product or service rendered by any public utility as herein defined, and to prescribe reasonable regulations for examination and test of such product or service and for the measurement thereof.

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“(g) After hearing, by order in writing, to establish reasonable rules, regulations, specifications and standards to secure the accuracy of all meters and appliances for measurements.

“(h) To provide for the examination any test of any and all appliances used for the measuring of any product or service of a public utility as herein defined.”

Pursuant to the authority vested by the statute, the Board gave notice to all public utilities furnishing water and all others interested that it would, on Tuesday, October 3d, 1916, hold a hearing for the purpose of considering the promulgation of rules and regulations governing the service of water by public utilities, and the fixing of standards for such service.

As a preliminary to such hearing and discussion, a list of suggested rules, regulations and recommendations was submitted to all water utilities in the State, and public notice given to municipal authorities and others, and full opportunity was given for objections, suggestions and recommendations.

An adjournment was taken after a complete discussion, and further objections and recommendations were received. Following this, opportunity for the submission of briefs was afforded, of which privilege many utilities availed themselves. Practically all of the water companies doing business in the State were represented at the hearings and in the discussions. The proposed rules, except as to the provision covering the cost of installing services, met with little objection. The Board has carefully considered the objections and recommendations offered, and after full consideration has concluded to issue an order putting into effect such rules and regulations as it deems just and reasonable; reserving, however, for further consideration and future determination the form of subdivision (b) of section 1, which covers the question of whether the utility or consumer shall bear the cost of installing the service from the main to the curb line and the necessary couplings and connections, upon which subject there was much difference of opinion, and considerable objection offered to imposing such cost on the utility. The rules and regulations now promulgated are designed to cover all other matters provided for in subdivisions (c), (f), (g) and (h) of section 16 of the Act of 1911.

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The Board may, however, if experience demonstrates the necessity therefor, approve special rules and regulation to cover local conditions which cannot be provided for by general rules.

Dated February 13th, 1917.

ORDER.

The Board of Public Utility Commissioners having this day adopted Rules, Regulations and Recommendations for utilities supplying water for public use, a copy of which Rules, Regulations and Recommendations is by reference thereto herein made part of this order.

The Board of Public Utility Commissioners, after due hearing, hereby ascertains and fixes the Rules, Regulations and Recommendations referred to herein as establishing adequate and serviceable standards and reasonable practices and regulations to be observed by such utilities, and

HEREBY ORDERS that the Rules and Regulations so fixed shall be observed and followed by each and every individual, co-partnership, association, corporation or joint stock company, their lessees, trustees or receivers appointed by any court whatsoever that now or hereafter may own, operate, manage or control any water plant or equipment for private use under privileges granted or hereafter to be granted by the State of New Jersey or by any political subdivision thereof.

The Rules and Regulations referred to herein shall be and have the full force and effect of an order of this Board except in so far as the text of the copy of the Rules and Regulations is underlined. Where such text is underlined the part so underlined should be regarded as a recommendation of this Board for the guidance of the utilities and of subscribers to their service when applicable to them, which recommendations in the opinion of the Board, should be observed and followed.

This order shall become effective March 10th, 1917.

Dated February 13th, 1917.

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Rules, Regulations and Recommendations for Water Utilities.

PART I.

GENERAL.

DEFINITION.

The term utility as used in these Rules, Regulations and Recommendations includes every individual, copartnership, association, corporation, or joint stock company, their lessees, trustees or receivers appointed by any court whatsoever, that now or hereafter may own, operate, manage or control within the State of New Jersey, any water plant or equipment for public use under privileges granted by the State of New Jersey or any political subdivision thereof.

I. DUTY OF THE UTILITY.

- (a) It shall be the duty of every utility to furnish and maintain such service, including facilities, as will be in all respects proper, reasonably adequate and practically sufficient for the accommodation and safety of its patrons. These rules neither enlarge nor limit the duties now imposed upon the utilities, but merely serve to define such duties and to determine methods for their performance. Each utility shall inform its prospective customers where peculiar or unusual conditions prevail as to the conditions under which service may be obtained from its system.
- (b) *In proposed Rules, Regulations and Recommendations submitted for hearing, a rule was included dealing with cost of service connections. No such rule is prescribed in this order, but such a rule will be made the subject of a supplemental order.*

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- (c) The company may require a written application for service connection before same is made.

II. IDENTIFICATION OF PROPERTY.

- (a) Each group of buildings or structures shall be provided with such signs as will definitely display the name of the operating company.
- (b) Each public hydrant is to be marked with a serial number and one or more initials, indicating the municipality in which it is located, and where there are two or more systems operating in the same territory, or in the borderland between two utilities where there may be doubt as to ownership, each hydrant shall be so marked as to readily identify its ownership.

III. CONSTRUCTION.

Buildings must be constructed and machinery and accessory apparatus installed and maintained in accordance with good standard practice.

IV. INSPECTION.

- (a) Each utility shall inspect its equipment and facilities at sufficiently frequent intervals to disclose conditions, if existing, which would interfere with safe, adequate and proper service. A periodical test of every hydrant shall be made to determine its working condition, and an inspection shall be made of each valve in the distribution system to determine its accessibility for operation, and its operating condition. Such inspections and tests shall be made at least once a year or oftener, if required.
- (b) Each utility shall keep in its operating department a record of the location of each valve box in its system. This record shall consist of a sketch or other record showing its position in the street, with measurements from some fixed object.

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- (c) Each utility shall formulate and put in practice a comprehensive and definite plan for flushing hydrants and dead ends of mains. This plan for flushing may be combined with the periodical inspection of hydrants.
- (d) A complete record of all inspections and tests shall be kept in accordance with Rule XVII.

V. OPERATING RECORDS.

- (a) Each utility shall keep a record of the time of starting and shutting down the principal units in its pumping and filtering plants, together with records of quantities of water pumped or filtered and amounts used for washing of filters. These records shall also include information as to pressures maintained at pumping stations.
- (b) Each utility shall keep a record of all interruptions to service on its entire system or on any portion thereof, which record shall contain the time, cause, extent and duration of the interruption.
- (c) Each utility shall keep a record of all accidents happening in or about or in connection with the operation of its property, filters or service, wherein any person shall have been killed or injured or property damaged or destroyed, with a full statement, as far as possible, of the causes of such accidents and the precaution, if any, taken as prevention against future accidents of similar character.
- (d) Each utility furnishing water service shall maintain a graphic recording pressure gauge at its plant, downtown office, or at some central point in the distributing system or each subdivision thereof, where continuous records shall be made of the pressure in the mains at that point.

Utilities operating in municipalities of five thousand or more inhabitants shall equip themselves with

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one or more graphic recording pressure gauges in addition to the foregoing, and shall make frequent records, each covering intervals of at least 24 hours' duration, of the water pressure at various points on the system. All records or charts made by these meters shall be identified, dated and kept on file, available for inspection for a period of at least two years.

These records shall be kept as specified in Rule XVII.

VI. PROPERTY ON CONSUMERS' PREMISES.

- (a) A utility may refuse to connect with any customer's piping system when it is not in accordance with the plumbing rules of the municipality or the reasonable rules of the utility.

The utility will not be held responsible for resulting inadequacy of service if customers make additions or alterations to the equipment on their premises without notifying the utility of the changes or additions, and the installation must comply with the plumbing rules of the municipality or of the utility furnishing the service, unless such rules have been, after investigation by the Commission, declared to be unreasonable.

- (b) The utility should have the right of access to customer's premises and to all property furnished by the utility at reasonable times for the purpose of reading meters or inspecting or replacing appliances used in connection with the supply of service, or for the removal of its property at the time service is to be terminated. The customer should obtain or cause to be obtained all necessary permits needed by the utility in giving it access to the appliances referred to. The customers should not permit

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access to the meter and other appliances of the utility except by authorized employees of the utility or properly qualified State or local inspectors. In case of defective service, customers should not interfere with the apparatus belonging to the utility, but should immediately notify the proper parties to have the defect remedied.

PART II.

METERS.

VII. OWNERSHIP.

The utility shall, without charge, furnish and install each customer supplied with water on a measured basis, with a suitable meter and such service appliances as are customarily furnished by the utility in order to connect the customer's equipment with its mains.

Note.—Any utility now furnishing service through meters owned by customers must arrange to take over the same by January 1st, 1918, and thereafter own and maintain all service meters. This rule does not apply to service furnished other water-supply systems.

VIII. LOCATION.

All meters hereafter placed in buildings shall be located in the cellar or first floor, as near as possible to the point of entrance of the service, in a clean, dry safe place, not subject to great variation in temperature, so located as to be easily accessible for installation or disconnection and for reading, and of a type suitable for the purpose and location. The installation of meters and connections shall be in accordance with the reasonable rules of the utility furnishing the service.

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IX. TESTING EQUIPMENT.

Each utility having more than one hundred meters in use shall provide and maintain suitable and adequate facilities for testing its water service meters, including a complete testing equipment of a form approved by the Commission. Utilities may co-operate in arranging for such facilities. A representative of the Commission will examine and calibrate the testing apparatus and provide same with a serial number and a seal having the date of the inspection clearly shown. After July 1st, 1918, tests made with uncertified equipment shall not be deemed authoritative.

X. ALLOWABLE ERROR.

No water meter shall be placed in service, nor allowed to remain in service, if it registers more than 103 per cent. of the water passed or less than 97 per cent. on full capacity.

XI. PERIODICAL TESTS.

(a) No utility furnishing metered water service shall allow a meter to remain in service for a period longer or for a registration greater than that specified in the following table without checking it for accuracy and readjusting it if found to be incorrect beyond the limits established in Rule X.

5/8-inch meter, 10 years or 750,000 gals.

3/4-inch meter, 8 years or 1,000,000 gals.

1-inch meter, 6 years or 2,000,000 gals.

All meters above 1 inch, 4 years.

(b) All water meters in service on or after July 1st, 1917, for which there is no record of test within five years, must be tested as soon thereafter as circumstances will permit, and in all cases within two years from July 1st, 1917.

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- (c) Each water service meter installed after July 1st, 1917, shall have been tested for accuracy by the utility within one year prior to its installation. It shall also be inspected by the utility for proper connections, mechanical conditions and suitability of location within thirty days after installation.

XII. REQUEST TESTS.

Each utility shall, without charge, make a test of the accuracy of a meter upon request of a customer, provided such customer does not make a request for test more frequently than once a year. A report giving the results of such tests shall be made to the customer and a complete record of such tests shall be kept in accordance with Rule XVII.

XIII. TESTS BY COMMISSION.

Upon formal application by any customer to the Board of Public Utility Commissioners, a test will be made of the customer's meter by an inspector employed by the Board, such test to be made as soon as possible after receipt of the application. For such test a fee of one dollar shall be paid by the customer at the time application is made for the test; this fee to be retained if the meter is found to be slow or correct within the allowable limits. If the meter is found to be fast beyond the allowable limits, the fee of one dollar will be returned to the customer and collected from the utility owning the meter. Each meter to be so tested is to be removed, and will be tested by an inspector of the Board, using the nearest certified testing apparatus. In certain cases, tests will be made with portable test meters. In cases of dispute, however, as to the accuracy of such meter, the test made with the certified testing apparatus shall be considered the correct one. The customer will be notified when the test is to be made, and should have a representative present to witness the test.

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XIV. CHANGING METERS.

No utility shall make any charge for replacing a meter where such replacement is requested by a customer unless the meter first referred to has been in use less than one year, in which case a reasonable charge may be made to cover the actual expense of making the change.

XV. METER DIALS.

Meter dials shall read in United States gallons or in cubic feet.

Note.—It is RECOMMENDED that, wherever possible in future, meters be used which indicate gallons instead of cubic feet.

XVI. METER TEST RECORDS.

Whenever a water service meter is tested, the original test record shall be kept as specified in Rule XVII, giving the information necessary for identifying the meter, the reason for making the test, the reading of the meter before being disturbed and the accuracy of the meter, together with all data taken at the time of the test. This record must be sufficiently complete to permit the convenient checking of the methods employed and the calculations made. A record shall also be kept showing the full history of each meter and indicating the date of the purchase, manufacture, size, serial number, various places of installation with dates of installation and removal and the reason for such removal, and the date and general results of all tests. A report shall be made to the Board at quarterly intervals giving a summary of the results of the tests. Blank forms will be furnished by the Board on which reports are to be made.

XVII. RECORDS AND REPORTS.

All records required by these rules shall be kept within the State at an office or offices of the utility located in the territory served by it, unless otherwise

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pecially authorized by the Commission, and shall be open for examination by the Commission or its inspectors. Each utility shall notify the Commission of the office or offices at which the various classes of records are kept.

PART III.

BILLS FOR SERVICE.

XVIII. METERED SERVICE.

Bills for metered service shall be rendered at least once each quarter, and shall show the readings of the meter at the beginning and end of the period for which the bill is rendered, and shall give the dates on which the readings were taken. Bills shall also show the gross amount charged and the net amount after deducting the discount, if any, allowed for prompt payment.

When a bill is rendered a second time, covering a period for which a bill has been rendered, the period shall be clearly stated on the bill.

The basis of computing bills for metered service shall be the same as indicated by the meter dials, that is, if meters register in cubic feet, the bills shall be made out in cubic feet, or if the indication is in gallons, the bills shall be made out in gallons, unless otherwise authorized by the Commission.

XIX. INSTRUCTION.

Each utility supplying service through meters shall adopt some method to inform its customers as to the methods of reading meters, either by printing on bills a description of the method of reading meters or a notice to the effect that the methods will be readily explained on application. It is RECOMMENDED that an exhibition meter be kept on display in each office maintained by a water utility.

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XX. FLAT RATE SERVICE.

Bills for service on a flat or fixture rate basis shall be based upon inspection. This inspection shall be made at least once in three years, and shall be sufficiently comprehensive to determine what changes, if any, have been made in the fixtures served. The record of this inspection shall be kept upon cards, slips, or in a book especially provided for this purpose, and shall show—

1. The customer's name,
2. The address,
3. The description of the property, whether store, factory, residence, fountain, hydrants, etc.,
4. A list of the fixtures, with the rate charged for each.

Bills for flat rate service may be rendered annually, semi-annually, or quarterly.

SUPPLEMENTAL REPORT.

S. W. Borden, C. P. Bassett and F. C. Kimball for Lakewood Water Co.; F. C. Kimball and C. P. Bassett for Commonwealth Water Co.; F. V. Pitney for Morris Aqueduct Co.; C. K. Corbin for Bergen Aqueduct Co., Bergen Water Co., and Glen Rock Water Co., Inc.; G. B. Cade, J. G. Campbell and A. S. Henderson for New Jersey Water and Light Co.; Wellington LaMonte for Tintern Manor Water Co.; W. C. Jones for Delaware River Water Co.; A. W. Cuddeback for Passaic Water Co., Acquackanonk Water Co., Montclair Water Co., Little Falls Water Co., and Butler Water Co.; H. L. Boissevaine for Monroe Water Co.; E. E. Carlyle for Rumson Improvement Co.; J. H. Forsythe for Stockton Water Co.; T. Y. Smith for General Water Supply Co.; A. C. Doller for Egg Harbor Water Co.; M. W. Pharo for Woolwich Water Co., Tuckerton Water Co. and Jamesburg Water Co.; A. Mundy for Middlesex Water Co.; C. G. Justice for Glen Lake Water Plant; S. A. Applegate for Toms River Water Co.; William Curry for Shark River Water Co.; H. D. Eldridge for Princeton Water Co.; W. H. Roth for Monmouth Water Co.; B. G. Hall for Paulsboro Water Co.; M. D. Ruderow for Merchantville Water Co.; S. J. Franklin for Millville Water Co.; T. E. DeYoe for Sea Isle City Water Co.; E. H. Smith and T. J. Grayson for New Jersey Water Service Co.; C. F. Sheppard for Clementon Springs Water Co.; R. W. Edwards for Ocean City Water Co.; Joseph Mayer for Point Pleasant Water Works Co.; W. I. Mason for Bound Brook Water Co.; E. H. Hill for Maple Shade Water Co.; A. B. Allen for Flemington

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Water Co.; E. J. Neighbor for German Valley Water Co.; S. F. Sharp for Pennington Spring Water Co.; E. F. H. Reeve for Mount Holly Water Co.; J. W. Whelan and J. H. Townley for Elizabethtown Water Co., Raritan Water Co. and Piscataway Water Co.; H. R. Cook for Watchung Water Co.; W. J. Whelan for Plainfield Union Water Co.; D. O. French, W. M. Wherry and H. L. DeForest for Hackensack Water Co.; G. G. Stryker for Peoples Water Co.; A. H. Kean for Camden-Glassboro Water Co.; S. D. Williams for Township of South Orange; A. Potter for Town of Irvington; William C. Asper for Town of Weehawken.

By order dated February 13th, 1917, the Board put into effect Rules, Regulations and Recommendations for the control of water utilities, but reserved for further consideration subdivision (b), article 1, of such rules.

After ample opportunity for discussion, and after full consideration of all the matters suggested and arguments adduced, the Board concludes that subdivision (b) of article 1 should read as follows:

“(b) Upon making service connections, the tapping of the main shall be done, and the curb cock and couplings, the service lines from main to curb, curb stop-cock and couplings and curb box shall be furnished and placed by the utility or its agent at the expense of the utility; the remainder of the service connection to building shall be placed by the utility, but the exact cost thereof shall be paid by the owner. The municipal charge, if any, for permission to open the street shall be paid by the applicant. Whenever a tap is made through which regular service is not immediately desired, the applicant shall bear the entire expense of tapping the main, laying and maintaining the service pipes, couplings and connections, but shall be entitled to a refund for such part as the utility is hereinbefore required to assume whenever regular service is begun.”

Upon the question covered by the rule suggested, there is no uniformity of practice or opinion of the utilities of the State. Some install and pay for the service and connections from the main to the curb, some require the owner of the premises to pay the entire cost thereof, and some, indeed, have sought to impose in addition the initial cost of supplying and setting the meter on the consumer.

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Nor is there uniformity of rulings on this question by the regulatory bodies of the country. Probably because of varying conditions and resultant practices that have grown up in different sections of the country, we find that commissions have, for a variety of reasons assigned, adopted rules providing, in some instances, that the utility shall bear the cost of service installations, and, in other instances, that the consumer shall bear the cost in part or whole.

In the discussions on this subject, both orally at the hearings and subsequently in writing, the representatives of the utilities of this State appear unanimous in the conclusion that, after it is installed, the service should be under the control of the utility and that it should be charged with the duty of maintaining and, when necessary, of replacing it. Some of them argued that, after installation at the expense of the consumer, the service should immediately become the property of the utility, which should thereafter assume all responsibility therefor.

It would appear from these lines of reasoning that the utilities recognize generally the desirability, if not the necessity, of the service being under the control of the utility with respect to its original installation and maintenance in order that proper service may be assured.

There can be no question of the desirability of the utility controlling in these matters. Conditions that have arisen by reason of improper services have been repeatedly brought to our attention by complaints of consumers. Conflicts arise as to responsibility for inadequate service where the consumer installs the service and the company disclaims responsibility therefor. These would all be obviated if the utility, which is the only one having the privilege to use public highways for the purpose, installs the line.

It is the practice of some of the largest utilities to install services at their own expense.

The Public Service Electric Company installs the service from the curb to the house, provided it does not exceed thirty feet in length.

In *Stein vs. Consolidated Gas Co.*, decided April 5th, 1916, this Board decided that the utility should pay the cost of the

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conduit and cable from the curb line into the building, if the distance is not greater than 30 feet.

It has been the practice with gas companies operating in cities and towns to bear the entire cost of installing the service to the house, unless it should be of unusual length.

In *Titus vs. New Jersey Gas Co.*, Vol. 3, N. J. Utility Board Reports, p. 179, this Board said:

“After hearing, and full consideration of all the facts brought out, the Board is of opinion that any charge for that portion of the service connection lying between the curb lines is improper, and that the entire cost of that portion of the service must be borne by the gas company. With reference to the portion of the service connection from the curb line into the building it is not so clear that the company is in duty bound to pay the entire cost. This distance varies considerably, some buildings being located but a short distance from the curb line and others being located some distance back. It does not appear entirely just to burden all of the customers of a company with an excessive cost for a service connection occasioned by the location of the building at some distance back from the curb.”

In *Lane vs. Tuckerton Water Co.*, June 15th, 1915, this Board concluded that the water company should clean out the service as part of its duty to supply water.

In *Gilmore vs. Hackensack Water Company*, December 7th, 1915, this Board decided that the practice of the utility in requiring the owner of the property to pay for the installation of the service within the street lines and the stop-cock could not be approved as a just and reasonable charge.

From the foregoing it will appear that the Board has given consideration to the question here discussed as applied to various kinds of public utilities, and has uniformly found that so much of the service as lies within the curb lines should be paid for by the utility. After further consideration, we are unable to conclude that this rule is unfair and unreasonable. It appears to us to be manifestly just and reasonable and in accord with good

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utility practice and calculated to result more advantageously both to the utility and the consumer than any other rule.

It follows, of course, that expenditures actually made for the installation of services may be capitalized, and should be given due consideration in a proceeding for the ascertainment of just and reasonable rates.

A supplemental order will issue incorporating in the rules and regulations heretofore adopted and promulgated the provision above set forth.

Dated February 19th, 1917.

SUPPLEMENTAL ORDER.

As extended and modified May 28th, 1917.

The Board of Public Utility Commissioners, after due hearing, ascertains and fixes as a just and reasonable regulation and practice to be observed and followed by utilities supplying water for public use the following, to wit:

Upon making service connections, the tapping of the main shall be done and the curb cock and couplings, the service lines from main to curb, curb stop-cock and couplings and curb box shall be furnished and placed by the utility or its agent at the expense of the utility. The exact cost of the remainder of the service connection shall be paid by the owner, and the said remainder may be placed by the owner or by agreement between the owner and the utility, by the utility or its agent; *provided, however*, that if placed by the owner it shall conform to reasonable specifications prescribed by the utility. The municipal charge, if any, for permission to open the street shall be paid by the applicant. Whenever a tap is made through which regular service is not immediately desired, the applicant shall bear the entire expense of tapping the main, laying and maintaining the service pipes, couplings and connections, but shall be entitled to a refund for such part as the utility is hereinbefore required to assume whenever regular service is begun.

The Board hereby ORDERS that the regulation and practice hereby fixed shall be observed and followed by each and every individual, copartnership, association, corporation or joint stock company, their lessees, trustees, or receivers appointed by any

Point Pleasant vs. Point Pleasant Water Works Co.

court whatsoever, that now or hereafter may own, operate, manage or control any water plant or equipment for private use under privileges granted or hereafter to be granted by the State of New Jersey or by any political subdivision thereof.

The regulation and practice hereby fixed is intended to be in addition to any regulations and practices heretofore fixed by the order of this Board.

This order shall become effective March 14th, 1917.

Dated February 19th, 1917.

Extended and modified May 28th, 1917.

No. 402.

BOROUGH OF POINT PLEASANT

vs.

POINT PLEASANT WATER WORKS COMPANY.

1. The Board has held repeatedly that utilities may reasonably and properly adopt a rule requiring bills for flat rate service to be paid quarterly, semi-annually or annually in advance.

2. Conditions vary so radically in different localities that a general rule, applicable throughout the State, is impracticable and could not be fairly applied.

3. In seasonal resorts the whole annual rental may be reasonably required in advance.

Joseph Mayer, for the company.

Thomas L. Hobart, for the borough.

The complainant, by its letter of June 29, 1916, filed with this Board, makes charges against the Point Pleasant Water Company involving the following matters:

1. That the company requires payment of water rent from consumers one year in advance.

2. That the company has charged consumers \$15 each for meters which the company now wants to remove.

3. That the company makes a charge of \$7.50 per year for each faucet.

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4. That the company makes certain special charges for services afforded the municipality which are regarded as unreasonable.
5. That the company's service is inadequate.
6. That the company will not permit the municipality to take water for sprinklers from hydrants.
7. That the company has collected two water rents in one year for water supply to the same premises.

The borough was advised on July 7, 1916, by the secretary of this Board, that:

"When water is supplied upon a flat rate basis the water company is within its lawful rights when it insists that the water shall be paid for in advance. There is no fixed rule governing the period of time for which the advance payment may be collected. It has been held by this Board that at a summer resort, where a large number of people are supplied with water for a brief season only, but the plant and equipment of the company must be maintained throughout the year, it is not unreasonable for the charges to be made for a full year in advance.

"The right of a water company to advance payments, when water is supplied on a flat rate basis, is so thoroughly established by decisions of the courts that this Board would not, in disregard of the principles so established, require a water company to refrain from collecting water rents in advance.

"If subscribers to the water company's service refuse to make payments in advance the water company is within its lawful rights if it refuses to supply service, and if such service has been supplied and the subscriber refuses to pay the company's bill because the company insists that advance payment shall be made, the company is within its lawful rights in discontinuing the supply.

"When water is charged for on a flat rate basis it is the practice of all water companies and of all municipalities supplying water to make an additional charge for each spigot or outlet through which water is supplied. This seems to be the only reasonable and practicable method of charging on the flat rate basis. The charge for each spigot or outlet should be a reasonable charge.

"If it is the impression of those who insist that they shall be supplied with water through meters that a certain charge per thousand gallons of water will be fixed, and that if only a very small quantity of water is used, they will pay only for such use at the rate per thousand gallons, this impression is wrong and cannot be supported. When water is furnished through meters a water company is within its legal rights in establishing a minimum charge for service. This is due to the fact that there are certain fixed expenses incurred, such as interest on capital invested, cost of superintendence, of maintenance and of repairs to the general system, if a water plant is to be maintained in a position to supply service. It is regarded as equitable for these expenses to be distributed among the users of water so that every user, whether the use be large or small, will bear his part. Where the use is large the minimum charge is absorbed in the bill to the user. Where, however, the user does not use sufficient water through a meter for the charge per thousand gallons to amount to his proportion of the expenses mentioned above his bill would have to be increased beyond the amount of the charge per thousand gallons so as to reach the minimum charge.

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"Whether a water company should be required to establish a minimum charge instead of a flat rate and supply water through meters at a charge per thousand gallons therefor to all who want metered service can only be determined by the Board after an investigation and hearing and upon evidence adduced at such hearing."

The other matters complained of were referred to the chief inspector of this Board and subsequently set down for hearing on November 29, 1916.

The company objected to the promiscuous use of fire hydrants for filling the sprinkling carts. From a personal examination of the company's system by our inspector, it appears that there are eight water cranes installed for the specific purpose of furnishing water to the wagons. These cranes are located at such places that under most conditions sprinkling carts would fill up at one crane and would be emptied when it reached a point near another crane. If, however, they are not in the most suitable places, they could be changed; and if insufficient in number, additional cranes should be erected by the company at its expense.

Regarding the flat rates charged, the company makes a uniform "first faucet" charge of \$7.50 for each store and for each apartment. If any of these subdivisions of the building contain additional fixtures they are charged for at the prices for additional fixtures. It does not charge \$7.50 per year for *each* faucet as stated in the complaint. The practice of the company in this respect is the correct method of interpreting and applying flat rates in computing the total charge against a given building.

So far as shown there was only one case where the water company collected two water rents for the same premises in one year. This happened through a clerical error. A tenant rented a flat and paid on the taking of possession the water rent for a year in advance. It was afterwards learned that a former tenant had already paid the rent.

No proof was submitted showing inadequacy of service and the inspector's investigation and report of conditions found to exist have already been furnished to the borough.

Mr. Hobart was the only person to appear on behalf of the borough and he stated that the demand for installing of meters does not now seem to be very great; that the meter minimum

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offered by the water company is lower than in other places; and the complaint he particularly urged at this time was the company's rule requiring the payment of water rents one year in advance and the practice of charging consumers for the installation of the service pipe from the main to the curb or property line.

This Board has held repeatedly that utility companies may reasonably and properly adopt a rule requiring bills for flat rate service to be paid quarterly, semi-annually or annually in advance. Conditions vary so radically in different localities that a general rule, applicable throughout the State, is impracticable and could not be fairly applied. In seasonal resorts such as Point Pleasant, in our opinion, the whole annual rental may be reasonably required in advance.

The Board has filed recently an order applicable to all water companies, which deals with the question of installing service pipes. This establishes as a practice to be observed by such companies the following:

"Upon making service connections, the tapping of the main shall be done, and the curb cock and couplings, the service line from main to curb, curb stop-cock and couplings and curb box shall be furnished and placed by the utility or its agent, at the expense of the utility; the remainder of the service connection to building shall be placed by the utility, but the exact cost thereof shall be paid by the owner. The municipal charge, if any, for permission to open the street shall be paid by the applicant. Whenever a tap is made through which regular service is not immediately desired, the applicant shall bear the entire expense of tapping the main, laying and maintaining the service pipes, couplings and connections, but shall be entitled to a refund for such part as the utility is hereinbefore required to assume, whenever regular service is begun."

The above should apply to the Point Pleasant Water Works Company in the making of service connections at Point Pleasant.

Point Pleasant is a summer resort and a very large proportion of the residences are unoccupied during the winter months. This might mean that what is ordinarily considered a reasonable minimum charge would be lower than the annual flat rate now paid, and it would be manifestly unfair to the company to order the immediate installation of meters on the premises of all consumers. It would be a large item of expense to the company and it is the policy of the Board to have the same gradually installed with as

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much rapidity as may be reasonable, having regard for the financial condition of the company involved.

It is, however, recommended that meters be installed before June 1, 1917, in connection with hotels, large boarding houses, saloons, laundries, bathing establishments, liveries, boarding stables, garages, greenhouses, and all commercial and manufacturing establishments, and residences where unusual conditions of use prevail.

Dated February 27th, 1917.

No. 403.

BRADLEY BEACH

vs.

MONMOUTH COUNTY WATER CO.

1. That public service corporations have the right, for their own protection and the protection of the public interest, to make all needful rules and regulations for the safety and efficiency of the service of the public, and the consumer may be required to promise conformity thereto, is well-settled law.

2. There are numerous decisions, both of the courts and public service commissions, to the general effect that each family or tenant constitutes a separate consumer, and, where there are several buildings on one curtilage, each building (other than a garage, stable, private laundry or other building used by the family occupying the cottage connected therewith) should pay an additional minimum charge. This rule or regulation is held to be reasonable and is approved.

3. The Board holds that a water company should allow builders who desire to take water for building purposes the option of taking such water on a flat rate basis or through a meter.

4. Water meters on a customer's premises are beyond the company's care and observation. The occupant of the premises must take ordinary care of the various appliances within the building and such duty extends to the meters placed there by the water company. Customers should protect meters when located within their premises sufficiently to prevent damage, and if damage does occur through the fault or neglect of the consumer, the cost of making proper repairs should be borne by the consumer.

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5. A charge of one dollar by a water company for turning on water after it has been turned off at the request of a customer is a reasonable charge and permissible.

6. A water company has a right to discontinue service to a house from which water is being supplied to an adjoining lot for building purposes even though the water passes through the meter.

Ward Kremer, for complainant.

Durand, Ivins & Carton, for the company.

The Borough of Bradley Beach alleges that certain rules, regulations and practices of the Monmouth County Water Company are unjust and unreasonable.

A number of charges are made and to avoid confusion we will consider them *seriatim* as follows:

1. That it is the custom of the company where there are two or more houses on one lot to insist upon the installation of a water meter for each house and upon the payment for the use of each meter a minimum charge of \$6.50 (should read \$6.00), all being owned by the same person.

The custom of the company in cases where there are two or more houses on one lot is to require each house facing the street to connect with the water mains by independent service pipe, each house being supplied with water through a separate meter and under a separate minimum charge. Where but one house faces the street and one or more houses are in the rear of the front house, the company's custom is to require that a separate service pipe shall be installed from each house to the water main; when this is not done and the two or more houses are supplied with water through the same service pipe and meter, the company makes a minimum charge of \$6.00 for each house so supplied.

Ormond P. Taylor testified that he was the owner of two houses on the corner of Madison and Brinley Avenues, that a house having about six rooms was formerly located on the corner but was removed to the rear end of the lot and turned around so as to face the side street, and that a new house was constructed on the old site, having about eight rooms. The service pipe to the old house was connected to the main in Brinley Avenue and when the old house was removed, the service pipe was extended to the

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new location and a branch made to the new house, all inside of the lot. A meter was installed in each house and a minimum charge of \$6.00 per annum made for each house.

Nate Poland testified that he had three houses served through two meters. The houses referred to were on Fletcher Lake Avenue. The northerly house is supplied by a service pipe coming from the cross street to the north. The middle house is served through a service pipe coming from the cross street (La Reine Avenue) to the south. The meter for the middle house is located in a box near the curb line, and when the third house was moved to its present location a connection was made to the service pipe serving the middle house. It appears that the company had sent a form of application to Mr. Poland but it was not signed by him. The present service connection was not approved by the company in the manner made.

Anthony D. Pierce, the owner of an eight-room house on Fourth Avenue and a three room bungalow on the rear of the lot, was charged \$6.00. The evidence shows the minimum charge of \$6.00 for the house and \$3.00 added for the bungalow. As his bills always exceeded \$9.00 per annum, he was unaware of the proper minimum charge and had never been affected by it.

Louis R. Rose owns buildings on the northeast corner of Main Street and Ocean Parkway. This property includes a two-story brick building with three stores on the ground floor and two flats above with two cottages facing on the side street. The corner store with two flats above are served through one meter. Each of the other stores had its separate meter, and each of the residences in the rear had its own meter; there being seven tenants served through five meters.

For the most part this testimony tends to show that the company is enforcing its regulations as far as possible, but some users of the service have refused or neglected to comply with the regulations and notify the company of the installation of certain service pipes.

The rule of the company is,

"No owner or tenant of any premises supplied with water by this company shall be allowed to supply other persons or families or other premises, except as stated in his or her application."

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That public service corporations have the right, for their own protection and for the protection of the public interest, to make all needful rules and regulations for the safety and efficiency of the service and the convenience of the public, and the consumer may be required to promise conformity thereto, is well settled law.

The term "premises" in the rules of this water company must be construed to mean the tenement or building occupied by a consumer. The terms "premises," "consumer," "house," and "property" have all been discussed by this Board in the case of *Chalmers vs. Wildwood Water Works Company* (pg. 154, Vol. 1, Reports Board of Public Utility Commissioners). In that case Chalmers had taken water service to a house on the front of the lot and afterwards erected two bungalows on the same lot in the rear of the front house, and allowed the tenants of the two bungalows to take water service from a common spigot in the yard. The Board stated the following:

"We conclude that 'consumer' and 'house' in the pending case must be construed to mean premises supplied through a single service, whether there stand thereon one or more separate structures. * * * The decision that only one minimum may be exacted for the supply of water by a single service to the buildings on given premises is based upon the ordinance and agreement in this particular case. If, at the expiry of this agreement, new minimum charges are to be set, this Board will not be debarred from considering favorably any equitable arrangement whereby the minimum charges may be graduated according to the different character of the premises supplied. A minimum graduated according to the equitable proportion of the permanent investment required for the supply of different premises and the establishments thereon is not unreasonable or unjust."

The conclusion expressed in the opinion of October 10, 1911, was that the company should withdraw and cancel the two separate and extra minimum charges for the small cottages in the rear of the main dwelling house. This matter was reopened by application and reheard, following which the Board stated:

"After such rehearing the Board is of the opinion that when the contract and ordinance were originally concluded the situation was that a single cottage ordinarily was upon each lot. A fair interpretation of the ordinance and contract under the circumstances was that the eight-dollar minimum was for supplying the household in the one cottage ordinarily standing upon one lot. The building of bungalows in the rear of the main house created a wholly new condition not originally contemplated; and we see no evidence, upon reflection,

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to show that a \$5 minimum for each bungalow may not, on the whole, be warranted. To this extent the former opinion in the Chalmers case is reversed.”
* * * (Page 360, Vol. 1, Reports Board of Public Utility Commissioners.)

Under date of October 14, 1913, the Board filed a report and order, fixing a system of minimum charges for the Wildwood Water Works Company based upon the number of rooms in the case of ordinary dwelling houses, and upon the size of the meter where meters one inch and larger were in use.

In the Board's report the following is stated:

“If the number of rooms is the criterion of the consumer's requirement, the aggregate number of rooms contained in all structures upon the premises should determine the minimum.” (Page 218, Vol. II. Reports Board of Public Utility Commissioners.)

Since the last decision there has been no complaint regarding the schedule of minimum charges as applied in the City of Wildwood.

In the uniform rules and regulations recently adopted by the Commission for all water companies, the term “customer” is defined as

“* * * the party contracting for service to a property as hereinafter classified, i. e.—

“(a) A building under one roof owned by one party and occupied as one business or residence, or

“(b) A combination of buildings owned by one party in one common enclosure, occupied by one family or business, or

“(c) The one side of a double house having a solid vertical partition wall, or

“(d) A building owned by one party of more than one apartment and using in common one hall and one entrance, or

“(e) A building owned by one party having a number of apartments or offices and using in common one hall and one or more means of entrance.”

In the present case a minimum annual rate of \$6.00 is fixed in the franchise of the company for each metered service of private consumers and as this amount is not unreasonable we will not attempt to modify it. Each building facing on a street must have its own separate service pipe with a stop-cock located at the curb so as to make possible the control of the service to each building independently; and each building or portion of a build-

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ing occupied by separate tenants constitutes a separate customer in so far as the computation of the minimum charge is concerned. Where a bungalow or cottage is built on the rear of an interior lot, we consider it unreasonable to require a separate service from the street main to the rear building. The rear bungalow in such case may be served through the same meter and service furnishing the front building. Where such bungalow is used in connection with the front building by the same family, no additional minimum charge may be made but where the rear bungalow is occupied independently by a separate family an additional minimum charge shall be allowed. Where a stable or garage is located in the rear of a lot utilized in connection with the cottage in front, service to the rear building shall be furnished from the front building without an additional minimum charge.

There are numerous decisions, both of the courts and public service commissions, to the general effect that each family or tenant constitutes a separate customer and, where there are several buildings on one curtilage, each building (other than a garage, stable, private laundry or other building used by the family occupying the cottage connected therewith) should pay an additional minimum charge. This rule or regulation is a reasonable one and is accordingly approved.

2. Alleges the temporary flat charge for water used for the purpose of building is excessive and that under the terms of its franchise the company is required to furnish *metered* service for all purposes in the borough. In other words it denies the right of the company to charge the owner or contractor a flat rate for water furnished for buildings in the course of erection.

Section 4 of the franchise under which the company is acting reads:

"* * *. All water used by private consumers shall be charged for at the rate of thirty-five (35) cents per thousand (1,000) gallons through water meters furnished by the company."

The company, however, only charges at the rate of twenty-five cents. There is no exception and no reference to any right to charge a flat rate for building or any other purpose. The clause immediately following reads:

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"The company to have the right to charge a minimum annual rate of six (6) dollars whether the quantity used at the rate aforesaid shall amount to that sum or not, * * *."

The references to "private consumers" and "a minimum annual rate of six (6) dollars" indicate that such method of charging an applicant for a temporary building water-supply such as needed for the erection of a building, was not then in contemplation, but as it is a simple matter to furnish such service by meters, the Board is of opinion that the company should allow builders who desire to take water for building purposes, the option of taking such water at the flat rate basis now established or through a meter. Where a meter is desired, the builder should make application at the company's office and be required to make a deposit of \$15.00 to insure the safekeeping of the meter during the construction of the building. When the work is completed and the meter no longer needed, it is to be removed by the company, inspected, put in order, and the cost of repairs charged against the builder's deposit. The balance of the deposit to be returned to the builder. In addition to the charge for water used through a meter, the company will be allowed to charge \$2.00 to pay the cost of installing and removing the meter in addition to the reasonable charges for putting the meter in repair, if any repairs be needed.

3. The borough alleges that by virtue of the franchise under which the company operates in Bradley Beach it must lay pipes and mains in *all* streets and alleys of the borough for the purpose of serving its inhabitants; that it fails so to do and asks that the company be compelled at its expense

"to lay mains wherever it is its duty to do so under the terms of the franchise under which it operates."

The borough insists that because the franchise of the company contains the following clause, viz.:

"The East Jersey Coast Water Company (to whose rights the present water company succeeded), a corporation organized under the laws of the State of New Jersey, has applied to the Mayor and Council of the Borough of Bradley Beach for permission to lay its water mains along and through all the streets

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and alleys of the Borough of Bradley Beach that are now or may hereafter be opened or extended for the purposes of supplying the Borough and its inhabitants with water."

that by its acceptance a contractual relation between the borough and the company exists which this Board could summarily enforce by its order.

We fail to discover any such contract therein.

It is the duty of the company to run all piping located or required within the public streets and to extend service connections as far as the curb line and inclusive of the stop-cock and box housing the same. So much of the piping as is required to connect the customer's service pipe at the curb with the main must be laid by the company at its own expense. Instead of requiring individual service pipes in any street, it is the duty of the company to lay a proper sized pipe therein. Each of the premises facing on any street will be required to run its independent service pipe as far as the street curb.

This Board has full and ample power, after hearing, upon notice, by order in writing to require a public utility

"(c) to establish, construct, maintain and operate any reasonable extension of its existing facilities, where, in the judgment of said Board, such extension is reasonable and practicable and will furnish sufficient business to justify the construction and maintenance of the same, and when the financial condition of the said public utility reasonably warrants the original expenditure required in making and operating such extension."

Application for an extension must specifically set forth the improvement demanded and proof of all the statutory requirements made before an order could be properly suggested. In the present case the complaint is too indefinite to be acted upon.

4. Failure of the company to provide adequate and proper fire protection.

No testimony was offered on this part of the complaint and it is therefore passed without comment.

5. The right of the company to charge a customer for the cost of repairing a meter damaged by frost, sand or otherwise while on the customer's premises.

Meters on customer's premises are beyond the company's care

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and observation. The occupant of the premises must take ordinary care of the various appliances within the building and such duty extends to the meter placed there by the water company. Customers should protect the meters when located within their premises sufficiently to prevent damage and if damage does occur through the fault or neglect of the consumer, the cost of making proper repairs should be borne by the consumer.

6. The right of the company to cut off water at the curb for non-payment of water rent or other violation of the company's rules and to charge \$1.00 for turning on the water again.

This Board has approved a general rule that service under an application may be discontinued for any of the following reasons:

(a) For the use of water for any other property or purpose than that described in the application.

(b) Under the flat rate service, for addition to such property or fixtures, or increase in the use to be made of water supply without notice to the utility.

(c) For willful waste of water through improper or imperfect pipes, fixtures or otherwise.

(d) For failure to maintain, in good order, connections, service lines or fixtures owned by the applicant.

(e) For molesting any service pipe, meter, curb stop cock or seal or any other appliance of the company.

(f) In case of vacancy of premises.

(g) For neglecting to make or renew advance payments or for non-payment for water service, or any other charges accruing under the application.

(h) For refusal of reasonable access to property for purposes of inspecting or for reading, caring for or removing meters.

A charge of \$1.00 for turning on the water after the same has been disconnected is reasonable and permissible.

7. The right of the company to charge \$1.00 for turning on the water after it has been turned off at the request of the customer.

This is also a reasonable charge and permissible.

8. The right of the company to discontinue the service to a house from which water is being supplied to an adjoining lot for building purposes even though the water passes through the meter.

It has the legal right to make such a regulation. See subdivision (a) in the answer above to the sixth inquiry.

9. The right of the company to insist upon the borough dis-

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continuing taking water from fire plugs for sprinkling purposes where water cranes have been erected for that purpose.

While fire hydrants are erected primarily for fire protection purposes they have become a necessity for sprinkling purposes at certain seasons of the year. There was no testimony in the case to show where the various water cranes have been erected, but if there are a sufficient number of water cranes, properly erected, at suitable locations throughout the borough, a rule which forbids the tampering with fire hydrants by anyone, excepting the properly constituted fire authorities or others using the hydrants for fire purposes, is reasonable.

If there are not enough water cranes to meet the sprinkling requirements of an existing contract between the borough and the water company for the furnishing of water for sprinkling purposes, this Board will order the erection of such additional cranes as may be necessary and proper, at the expense of the company, but further evidence of existing conditions would be necessary before any finding could be made.

The complainant charges most of the regulations recited herein to be "unjust and unfair" to consumers and detrimental to the interest of the borough. Certainly such allegations have not been sustained by any proofs. The testimony of the witnesses tended more particularly to show that there were violations of the company's rules and to some degree a lack of uniformity in their enforcement, rather than unfairness or unreasonableness in the rules themselves.

CONCLUSIONS.

Each separate building facing on a public street shall be served through its own separate service pipe which shall be run from the building to the curb line at the expense of the consumer.

That the connections in all streets, including the service connections and the curb stop and box, shall be laid at the entire expense of the company.

That where a building is located on the rear of an interior (not a corner) lot but one service shall be required.

Where a building on a rear end of a lot is a garage, stable, private laundry or other building used by the family occupying

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the residence in front, no additional charge shall be made to the regular minimum charge, but where the bungalow or cottage in the rear is occupied by a separate family or tenant, an additional minimum shall be charged.

Builders desiring water for building purposes shall have the option to take water on flat rates or by meter on depositing \$15.00 to insure the return of the meter in good order. The cost of inspecting and repairing the meter plus the charge of \$2.00 for installing and removing the meter may be deducted from the deposit of \$15.00 before returning the balance to the builders.

The right to discontinue service for non-payment of current bills and to charge for making a connection other than an original connection is well established.

The right to discontinue service where water has been diverted for purposes not called for in the original application is a proper regulation.

The company may safeguard the fire protection system by refusing to allow hydrants to be used for purposes other than fire, where proper and sufficient water cranes are furnished and erected by the company at its own expense to meet municipal sprinkling requirements.

Dated February 27th, 1917.

No. 404.

BERNARDS TOWNSHIP

VS.

BERNARDS WATER COMPANY.

1. A water company agreed to lay mains in certain streets and maintain at a designated point a pressure of not less than forty pounds per square inch.
2. It appears that water is being furnished under a pressure of eighty pounds.
3. The company making a charge for water for fire protection the matter is submitted to the Board.

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4. It does not appear that all the increase in pressure is due to requirements for fire protection. A reduction to the forty pounds pressure would leave residences on higher levels without water.

5. The Board holds that twenty-five pounds of the excess is reasonably chargeable to fire protection. A charge to cover cost of supplying water under a pressure twenty-five pounds in excess of franchise requirements is allowed.

P. V. Stryker, for the company.

H. P. Lindabury, for the municipality.

On July 6, 1916, the Bernards Water Company filed with this Board a schedule of rates for fire protection service which the company proposed to put into effect as of August 1, 1916. On September 1st the water company billed the township in accordance with the filed rates, which bill was made up as follows:

$\frac{3}{4}$ c. per in. ft. on 21,000 ft. of 6-inch main, and on 15,000 ft. of 4-inch main.

This bill for the month amounted to \$116.25. The township committee laid the bill over for further consideration and request was made to the Board for a hearing with regard to the reasonableness and justification for the rate. The first hearing was held on October 25th, but was adjourned to November 15th, and from that date to December 13th.

At the first hearing a copy of the franchise ordinance was submitted, this having been passed on February 4, 1902. From the ordinance it appears that the water company was authorized to lay mains in any portion of Bernards Township, and actually did lay mains in the sections known as Bernardsville and Basking Ridge. In the franchise ordinance the company agreed to lay certain sizes of mains in certain streets and agreed that the township should have the right, at its own expense, to install hydrants at any point along the mains. The water company further agreed that it would furnish water to any of these hydrants without charge and agreed to furnish this water so that the pressure at the square would be not less than forty pounds.

It appears from the testimony that when the plant was originally constructed, some time shortly after 1902, the water was obtained

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from wells and springs at a rather high elevation and pumped into a small reservoir near the top of the hill back of Bernardsville. Some years later, in order to obtain more water to meet the growing needs of the community, a new pumping plant was installed in a totally different location at a very much lower elevation, and to get water to the old reservoir it was necessary to pump against a pressure of one hundred and eighty pounds. At the time the pumping plant was built at the new location, consideration was given to the construction of a new reservoir which would materially reduce the pressure against which the company was required to pump. If the new reservoir had been constructed at a lower level the necessity for the use of a large amount of extra heavy pipe would have been eliminated. The cost of the boiler and pump would have been less, due to the lessened pressure and the cost of operation would have been reduced. It appears further that these facts were brought to the attention of the township committee in office at the time, and after discussion with them, whether by agreement or not is not now ascertainable, the company did not construct the new reservoir at the lower level, but put in a plant capable of delivering the water to the reservoir on the high level.

Testimony brings out the fact that the pressure furnished at the square in Bernardsville is about eighty pounds. The franchise requirement calls for at least forty pounds. Based upon this greater pressure supplied, the company claims compensation. At the different hearings, various figures were submitted and the testimony contains much other data brought out by cross-examination, with regard to the cost of that portion of the system which is required for fire protection. Data is also available showing the cost of furnishing the pressure in excess of forty pounds required by the franchise ordinance.

In this proceeding the company submitted an appraisal of its property which had been checked by engineers of the Board, and submitted also statements showing the earnings and expenses of the company, which indicate that the company has never paid dividends and at the present time is operating under such financial conditions as to be unable to finance the extensions and additions required to furnish safe, adequate and proper service. It appears

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that for several years the State Board of Health has been urging the water company to install a filtering system and the company has been unable to finance this improvement. In addition to this, various additions are necessary in order to properly serve the territory occupied by the company. It is clear from the testimony submitted that the company is in need of additional revenues and as it was receiving no revenue whatever for such fire protection as was afforded, the company filed the rate referred to above for this class of service.

The rate filed by the company for fire protection service was a charge of $\frac{3}{4}$ c. per inch diameter per foot of main per annum, to be applied to all mains of four inches and larger. In addition, a charge of \$6 per annum would be made for each hydrant owned and maintained by the water company. At the present time the hydrants in use, forty-four in number, are owned by the township authorities.

Testimony was submitted in the form of an exhibit giving an analysis of the total cost of fire protection. This indicates that the total cost to the company in accordance with the calculations was \$2,629.47 per annum, taking into account certain proposed extensions not yet installed. The exhibit also states that the cost for fire service on the established plant is in excess of \$1,700, and the figures show that the charge of $\frac{3}{4}$ c. per inch foot upon mains four inches and larger would amount to \$1,416 per annum.

A careful study has been made of the testimony and also the calculations found therein, and the exhibits submitted, and the Board is of opinion that under all the circumstances existing in this case, the company is not justified in charging the entire cost of the fire service as above calculated, to the township. On the other hand, it is only fair that the excess cost over and above what the company is actually required to do without charge, should be paid for by the township.

As already stated, the franchise ordinance requires a minimum pressure of forty pounds at the square and the testimony shows that a pressure of eighty pounds has been maintained at that point. It does not appear that all of the excess is properly chargeable to fire protection. A reduction to forty pounds at the square would leave some of the houses on the highest levels with

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practically no service at all, and it appears that a minimum of fifteen pounds is requisite on the high levels in order to provide the service for the ordinary consumers. From this it would appear that the actual excess in pressure which might be properly chargeable to the fire protection under the circumstances is twenty-five pounds or 25-40ths of the excess.

The excess investment in the present plant, due to its construction so as to pump against the excess pressure, is estimated at at least ten per cent. on the investment in plant machinery, or \$8,100....	\$810.00
It is estimated that the excess weight of mains is confined to about six miles of the total main mileage of 11.82 miles and at 5 cents per foot excess cost due to heavy weight pipe, the excess investment in pipe is estimated at.....	1,584.00
	<hr/>
	\$2,394.00
Fixed charges on this excess investment at the rate of 6% for interest, 2% for depreciation, and 2% for taxes, a total of 10%, amounts to	\$239.40

Pumping against the high pressure involves an excess cost of operation which has been figured out in two different ways. In an exhibit is a statement of the averaged operating expenses for 1913, 1914 and 1915, and as the excess pressure of forty pounds results in placing approximately twenty-two per cent. additional duty upon the pumping plant, the company estimates that at least twenty per cent. of certain of the operating expenses are properly chargeable to the excess pressure.

This estimate of 20% amounts to..... \$984.40

As stated above, we have concluded that the forty pounds at the square is not sufficient to supply its ordinary customers on the high levels, but that fifty-five pounds is requisite for this purpose and that the excess properly chargeable to the township is that due to an excess pressure of twenty-five pounds. We, therefore, take 25-40ths of the operating cost which we have accepted as \$615.25, adding this to the fixed charges of \$239.40, gives us a total of \$854.65 which, under all the circumstances, we conclude to be the amount which should be paid annually by the township because of the higher pressure available at the square.

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It has been customary in most of the municipalities in New Jersey to charge for fire protection in accordance with a certain rate for each hydrant. In charging for each hydrant at the same rate the tendency is to cut down the number of hydrants and in this way to materially reduce the value of the system for fire protection purposes. The cost of fire protection to the water company is not in proportion to the number of hydrants, but is largely a matter of fixed charges involved in the plant, reservoir and distribution system. All of these items have to be sufficiently large to meet the demands caused by large draughts of water and this excess capacity is properly chargeable to fire protection. It will be seen that this charge has no direct relation to the number of hydrants connected to the mains. We have calculated that the fixed charges and cost of maintenance for the standard hydrant and its connections to the mains is approximately \$6 for a hydrant. If the fixed charges in connection with excess capacity of the pumping plant, reservoir and mains is levied as a direct charge against the distribution system, then the charge for each hydrant where the company owns and maintains them will closely approximate the cost and should be about \$6 per annum for each hydrant. This will enable the company or the municipality to install as many hydrants as are necessary in order to utilize the lines of hose in reaching fires.

We, therefore, conclude that the principal charges due to fire protection ought to be levied in some way upon the distribution system itself and the form of the rate schedule filed by the company is approved; that is, the charge per inch diameter per foot of main, or, in other words, the charge per inch foot. The amount of it, however, must be so calculated as to bring to the company per annum upon the existing system a sum approximating \$854. If properly applied, it is the Board's opinion that a rate of $\frac{1}{2}c.$ per inch diameter per foot of main will bring to the company approximately the amount which the Board has determined above should be paid by the township, and the Board hereby fixes as a just and reasonable rate for this portion of the service the amount of $\frac{1}{2}c.$ per inch diameter per foot of main plus the charge of \$6 per annum for each hydrant owned and maintained by the company.

Mrs. J. C. Atwater *vs.* Montclair Water Co.

This rate is subject to readjustment from time to time, dependent upon the changes that are made in the system to meet the growth of the communities. Testimony has already been submitted showing that additions and extensions are needed and these should be made as promptly as circumstances will permit.

A schedule in accordance with the conclusions herein expressed may be filed.

Dated February 27th, 1917.

No. 405.

MRS. J. C. ATWATER

vs.

MONTCLAIR WATER COMPANY.

The Board recommends in this case where a user of water employed a plumber to stop a leak, which it appears was in the street near the company's main, that one-half the cost be paid by the company, and that hereafter the company make its own arrangements for repairing service pipes.

Mrs. J. C. Atwater, in person.

A. W. Cuddeback, for the company.

Under date of September 12th, 1916, a letter was received from Mrs. J. C. Atwater, residing at 40 Oakwood Avenue, Upper Montclair, stating that on August 5th the Montclair Water Company had flushed out the water mains in the neighborhood and that the next day her cellar was filled with water. The water company was appealed to and Mrs. Atwater was informed that a plumber would have to be employed by her to make whatever repairs were necessary. As the water was found running into the cellar of the house, an excavation to determine the location of the broken pipe was

Mrs. J. C. Atwater *vs.* Montclair Water Co.

commenced near the house and the service pipe was uncovered as far as the curb line, when it was found that the break was in the street at some point then undetermined. Another appeal was made to the water company which authorized a plumber to make an excavation in the street. The excavation was then continued until the main, which was on the opposite side of the street, was reached. The leak was due to a break in the service leading into Mrs. Atwater's residence, and the water had seeped through the loose ground surrounding the service pipe.

The matter was first investigated by one of the Board's inspectors, who reported that the case appeared to be similar to the conditions which led to the complaint of Samuel L. Gilmore against the Hackensack Water Company. The determination in that case, made by the Board December 7th, 1915, was that the cost of maintaining as much of the house service pipes as lay within the public streets should be borne by the water company.

The Montclair Water Company objected to paying any portion of this cost, on the ground that all the service pipes in Montclair had been installed by the property owners; had been maintained in the same way; and that the company had in no way contributed either to the first cost or to their maintenance.

There is no dispute as to the facts. The break in the service pipe was found at a point near the company's main in the public street. Following the rule laid down by the Board in the Gilmore case, the cost of repairing or replacing so much of the service pipe as lays within the street lines should be borne by the water company. The total cost of the work done because of the leak at the Atwater premises appears to have been \$33.99, the greater portion of which is due to the excavation across the lawn in front of the house. If it had been the company's practice to maintain the service, the excavation would probably have been made the same way—that is, by starting the excavation at a point near the house. The fact that the water entered the cellar so freely, and as the house sets well back from the street, made it appear probable that the break was not far from the house itself. In view of all the circumstances in this case, and of the further fact that this would establish a new practice on the part of the water company, the Board believes it would be equitable if the cost of making the re-

City of Perth Amboy vs. Perth Amboy Gas Light Co.

pairs were divided equally between the water company and the customer.

The Board, therefore, RECOMMENDS that the company pay one-half of the cost of making the necessary repairs to the service pipe, and that in similar cases in the future where the leak is found to be within the street lines, that the company should make its own arrangements for repairing such service connections.

Dated February 27th, 1917.

No. 406.

CITY OF PERTH AMBOY

vs.

PERTH AMBOY GAS LIGHT COMPANY.

A gas company is directed to file with the Board plans to include additional holder capacity, the coupling of dead ends to secure circulation, the installation of automatic district governors, and a method by which coal and water gas may be mixed and result in uniform quality of gas furnished under a range of pressures that will comply with the Board's requirements.

Andrew J. Wight, Jr., for the City of Perth Amboy.

John W. Whelan, A. F. Reitemeyer and R. J. Convery, for the respondent.

In this matter complaint submitted by the Board of Aldermen of the City of Perth Amboy alleges that in certain particulars the Perth Amboy Gas Light Company fails to furnish safe, proper and adequate service. The company's answer which consists of a letter written by them on November 6th, 1916, is practically an admission that in certain respects the service of the company had not been proper and adequate. On the complaint and answer hearing was held in Newark.

City of Perth Amboy vs. Perth Amboy Gas Light Co.

At the hearing a number of witnesses were examined who testified that conditions in a certain section of the city are very unsatisfactory and that the principal cause of complaint appeared to be inadequate pressures and such great variety in pressures as to make it practically impossible to obtain sufficient light from fixtures or proper service from gas ranges and heaters at certain times.

The Board's gas engineer, Edward B. Annett, also testified with regard to conditions which he found in Perth Amboy.

The gas situation in Perth Amboy appears to be somewhat complicated. The original gas plant, located in the city, produces "coal gas" and is very much limited in its capacity. An additional supply of gas is received under high pressure from the Elizabethtown Gas Light Company, whose plant is located at Elizabeth. This gas, however, is what is known as "water gas."

The coal gas plant in Perth Amboy is limited not only with regard to its capacity for production, but also in its storage capacity. To give the best service the coal and water gas ought to be mixed in the holder. The high pressure line carrying water gas to Perth Amboy now extends as far as the coal gas plant, and, so far as connections are concerned, it would be possible to deliver the water gas directly into the holders at the coal gas plant. Such a plan, however, is impracticable, due to the small capacity of the present holders, in view of the present output of coal gas. Furthermore, the growth in the territory has been such that gas cannot be delivered throughout Perth Amboy directly from the present works without some method of boosting the pressure, and this has led to the reinforcement of the pressure at a number of points by means of district governors. This lack of pressure and the necessity for reinforcement from higher pressure mains is due to the small size of the distribution mains in the portion of the town where most of the complaints come from. This situation is further aggravated by the fact that there are a number of dead ends which should be connected up so as to improve the circulation and increase the effective transmission capacity.

Under the present conditions water gas is delivered through reducing valves into mains already partially supplied with coal gas under a lower pressure and such mixing as is done must be done

City of Perth Amboy vs. Perth Amboy Gas Light Co.

in the distribution system. This, at best, is a makeshift, and as soon as the proper methods can be determined upon, must be remedied by the installation of a large holder. Its exact location is a matter for further study.

The majority of complaints with regard to insufficient and widely-fluctuating pressures comes from the so-called hill section lying between the Central railroad on the east, Amboy Avenue on the west, and north of the Lehigh Valley railroad.

To reinforce this section the company has already purchased, and there is now lying upon the ground the material with which to construct a main from Amboy Avenue at Maurers southward to the present dead end near Alpine Street. A few hundred feet of this main has been installed, but the testimony in this case shows that it is imperative that the balance of the line be installed without further delay.

The company will be required to complete the installation of this reinforcement without further delay. This should not take more than twenty days.

Within thirty days thereafter the company will submit to this Board plans for putting all of its property and system into condition to furnish safe, adequate and proper service.

These plans should include additional holder capacity, the coupling of dead ends to secure circulation, the installation of automatic district governors, and a method by which coal gas and water gas may be mixed and result in uniform quality of gas, furnished under a range of pressures that will comply with the Board's requirements.

Upon failure to comply with the terms hereof, the Board will enter such order as seems necessary.

Dated February 27th, 1917.

Grade Crossings, Rutherford and East Rutherford.

No. 407.

IN THE MATTER OF THE PROCEEDINGS FOR THE SEPARATION OF THE GRADES OF PARK AVENUE AND UNION AVENUE, LOCATED IN PART IN THE BOROUGH OF RUTHERFORD AND IN PART IN THE BOROUGH OF EAST RUTHERFORD WHICH CROSS AND ARE CROSSED BY THE RAILROAD OF THE PATERSON AND HUDSON RIVER RAILROAD COMPANY, ERIE RAILROAD COMPANY, LESSEE, AT THE SAME LEVEL.

1. In conducting a proceeding to determine whether a crossing at grade on the dividing line between two boroughs should be eliminated, it appeared that all plans submitted for either an overhead or undergrade crossing met with the disapproval of the municipalities. The railroad company and the boroughs agreed upon changes providing for pedestrian subways and alterations at a nearby station to add to safety and asked that the agreement be approved and further action with respect to crossing elimination be delayed.

2. The Board agrees to this, reserving jurisdiction over the subject matter.

E. J. Luce and *O. J. Strasser*, for the Borough of East Rutherford.

J. M. Bell, for the Borough of Rutherford.

G. S. Hobart and *D. E. Minard*, for the railroad company.

On September 23d, 1913, the Board of its own motion initiated a proceeding and called a hearing to determine whether the crossings of Park Avenue and Union Avenue, in Rutherford and East Rutherford, or either of them, are dangerous to public travel or whether the public travel on such highways, or either of them, is impeded thereby, and to determine what order, if any, should issue for the alteration of said crossings, or either of them, and to determine any and all other matters which may be involved in the separation of the grades of said highways and of said railroad. The first hearing was held October 24th, 1913, and thereafter numerous hearings were held.

The taking of testimony consumed many days, and a large

Grade Crossings, Rutherford and East Rutherford.

number of plans, drawings and suggestions were submitted for consideration. At no time, however, was it possible to secure a plan which met with fairly favorable acceptance by the two boroughs, their residents and the company. To each suggestion offered, objection would be made by some of the parties in interest, and no plan was submitted which approximated the views of both boroughs.

In this situation, the Board took the matter into conference at the close of the taking of testimony.

The crossing in question is a dangerous one and has been the subject of several proceedings before the Board. At present it is protected by gates, operated from a tower and by two flagmen on the crossing. It is conceded that some steps should be taken to further lessen danger on the crossing, as well as to remove elements of danger to passengers who board or alight from trains at Rutherford station, immediately adjacent to the crossing in question.

The Board, after the conclusion of the hearings, directed Mr. Mead, its engineer in charge of bridges and grade crossings, to prepare a plan providing for the substitution of a highway called Orient Way to pass under the railroad in place of Park Avenue and Union Avenue, which were to be vacated over the tracks, and for the building of pedestrian subways to provide a means of crossing from one side of the tracks to the other at Park Avenue and to the station.

Notice was given of a further hearing on February 9th, 1916, for discussion and criticism of this plan, which was then introduced as an exhibit and made the subject of examination.

Following this hearing, the two boroughs and the railroad company joined in requesting a continuance to afford them opportunity for agreeing upon a plan for taking care of conditions at the crossing.

On December 19th, 1916, Rutherford Borough Council adopted a resolution approving an agreement and plan for the further protection of said crossing, and, at a later day, the Borough Council of East Rutherford adopted said agreement and plan.

In the resolution and in the agreement it is recited:

Grade Crossings, Rutherford and East Rutherford.

"WHEREAS, the company operates a four-track railroad running east and west (railroad direction) from Jersey City to and beyond Paterson, which said railroad forms the dividing line between Rutherford and East Rutherford, west of Hackensack River, in Bergen County, New Jersey, Rutherford lying on the south side (railroad direction) and East Rutherford lying on the north side (r. d.), the passenger station, which serves both boroughs, being located on the south side of the railroad, just east of the place where Park Avenue, the main thoroughfare of both boroughs, crosses the tracks of the company. The said crossing, connecting both boroughs, is known as the Park Avenue crossing, and is at grade. The elimination of this grade crossing, and the substitution of another crossing therefor, not at grade, has been considered for some years past by all of the parties hereto, and a proceeding to accomplish this purpose was instituted by the Board of Public Utility Commissioners of New Jersey, on its own motion, on the 23d day of September, 1913, which proceeding is still pending and undetermined; and

"WHEREAS, numerous suggestions or plans have been considered in the proceeding before the Board, and privately between the parties for the construction of an overhead or an undergrade crossing to be substituted for the Park Avenue crossing now at grade; and

"WHEREAS, the parties hereto have been unable to present any plan or suggestion for this purpose which either or both of the boroughs did not consider to be more damaging in effect than the danger to be avoided justified, and the parties hereto having considered a method of protecting the present grade crossing by means of gates and restricting its use, so far as practicable, to vehicular traffic, and the provision of pedestrian subways passing beneath the tracks of the company from one borough to the other, and the making of certain changes by way of island platform exits and entrances to enable passengers to board and leave the trains of the company at the Rutherford station without the necessity of crossing the tracks at grade; and

"WHEREAS, the parties hereto have held conferences and discussed plans of this nature and have reached a satisfactory conclusion and agreement which is represented in detail on certain blue-print plans attached hereto and made a part of this agreement."

Thereupon the two boroughs and the railroad company applied to the Board for leave to adopt the agreement and plan, and to have further action in the pending proceeding stayed.

By the agreement and plan adopted, it is proposed to restrict the use of the highway crossing of Park Avenue to vehicular traffic only, and to divert pedestrian travel to two subways, one constructed along the easterly line of the present crossing and connecting with the station and platforms, and the other to have an approach from Union Avenue east of Van Winkle Street to the station and platforms. Some changes in location and arrangement of the main station are to be made, island platforms are to be constructed and inter-track fences erected. Highway gates

Grade Crossings, Rutherford and East Rutherford.

or barriers that will prevent any use of the highway when they are down, together with barriers at the ends of the platforms, will, it is believed, so completely bar the way that accident at the crossing or to passengers will be impossible. The plan agreed upon is in substantial accord with the plans of Mr. Mead as to changes at the station and the construction of pedestrian subways and island platforms. The chief point of difference is that the plan of the two boroughs and railroad company makes no provision for the closing of Park Avenue crossing and the substitution of another crossing, either at the present location or at Orient Way as suggested by Mr. Mead.

At the hearing December 20th, 1916, Mr. Brameld, engineer for Erie Railroad Company, testified as follows:

"Q. (By Mr. Herrmann.) Would the adoption of these plans interfere with the adoption of the Mead plan at any subsequent time, particularly with reference to the location of that subway under Orient Way?

"A. You refer particularly to Mr. Mead's plan for the elimination of a subway under Orient Way? I would say no, it would not interfere; what it would give, it would give merely a couple more entrances from the platform to the proposed Orient Way subway; the present subways could be maintained; of course, with the Orient Way subway installed it may not be necessary to maintain that subway fifty or sixty or a hundred feet east of that.

"Q. (By Commissioner Donges.) This, in effect, carries out Mr. Mead's suggestion with respect to pedestrian and passenger subways?

"A. It does.

"Q. And is practically in accord, except for the adoption of Park Avenue crossing, or the substitution of the Orient Way subway?

"A. Yes, sir.

"Mr. Minard—Mr. Mead's plan did not provide for any island platforms.

"Witness—The first plan submitted by Mr. Mead did provide for island platforms and pedestrian subways at Park Avenue. The last plan presented by Mr. Mead cut out the consideration of island platforms.

"Q. (By Mr. Minard.) I understand then that this plan will be a very appropriate part of a general elimination scheme at some future time in accordance with Mr. Mead's Orient Way subway plan?

"A. It would."

In view of the difficulties encountered in adopting a reasonably satisfactory plan, and the opposition of the officials of both Rutherford and East Rutherford as well as many of the residents and property owners of both boroughs, and of the great expense involved in eliminating the crossing, the Board is of opinion that it should co-operate with the parties in interest in their efforts

Extension of Easton Street, Perth Amboy.

to remove the hazard at the crossing and station by some other means. In addition as testified by the engineer of the Erie Railroad Company, the changes and alterations will fit into any scheme that is likely to be adopted, if separation of grades is ever found to be necessary.

The Board is of opinion that it should give its assent to the execution of the agreement and to the changes and alterations proposed in lieu of the separation of grades at Park Avenue crossing as contemplated in the pending proceeding, in order to determine whether the danger will not be so reduced as to render further changes unnecessary.

The Board, however, retains jurisdiction over the subject matter and reserves the right to make such order touching the vacation of the highway, the substitution of another way, or otherwise, as may hereafter be required by the circumstances.

We will, therefore, continue the pending proceeding without day, with the understanding that it may be revived by the Board should occasion ever require.

Dated February 27th, 1917.

No. 408.

IN THE MATTER OF THE APPLICATION OF THE CITY OF PERTH AMBOY FOR PERMISSION TO EXTEND EASTON STREET AT GRADE CROSS THE PERTH AMBOY AND WOODBRIDGE RAILROAD COMPANY, NOW LEASED AND OPERATED BY THE PENNSYLVANIA RAILROAD COMPANY.

It appearing that a new crossing at grade, approval of which is asked for, is at the place proposed a public necessity such approval is given.

Andrew J. Wight, for the City of Perth Amboy.

Alan H. Strong and *J. F. Chandler*, for the Pennsylvania Railroad Company.

Extension of Easton Street, Perth Amboy.

This is an application for the establishment of a grade crossing in the City of Perth Amboy at Easton Street crossing the tracks of the Perth Amboy and Woodbridge Railroad Company, now leased and operated by the Pennsylvania Railroad Company. The said Easton Street is a public thoroughfare and has been open and used by the public for a number of years. In the summer of 1916 a temporary railroad crossing was established by order of this Board and protected by a flagman. The whole expense was borne by the city. It has been planked for its full width.

Easton Street runs east and west, joining State Street (which is the principal thoroughfare in the city) one hundred feet east of the railroad track. At the crossing there is only a single main line track curving from a point south of the crossing and beyond the crossing in a northwesterly direction. The first railroad crossing south of Easton Street is Hall Avenue about 1,000 feet distant. To the north from Easton Street to the tracks of the New Jersey Central railroad, a distance of 2,000 feet, no highway crosses the railroad tracks.

Easton Street, west of the railroad track, north and south, is practically entirely built up on both sides. The same condition exists from a point about 40 feet west of the tracks at State Street. The right of way from Easton Street to the point where the Perth Amboy and Woodbridge branch passes under the overhead crossing of the Central Railroad tracks is open.

Approaching the intersection of Easton Street and the tracks, from State Street, at a point about 50 feet east of the tracks, there is an unobstructed view to the Central railroad bridge on the north, and an unobstructed view south to a point beyond Hall Avenue. The view approaching from the west side is obstructed and very limited and protection should be afforded on account of existing physical conditions there.

The view of approaching trains from the westerly side of the crossing is limited and might require either a flagman or gate protection for the train movements. There are eight trains out and nine in passing over this crossing daily.

The regulations of the company require the speed of trains passing this point to be reduced to 10 miles per hour, but, in the

Extension of Easton Street, Perth Amboy.

opinion of Mr. Maybury, an inspector of this Board, they travel at the rate of between 15 and 20 miles per hour.

The petitioner alleges that there was an average daily count for fourteen consecutive days of 490 wagons, 297 automobiles, 136 bicycles and 1,097 pedestrians crossing Easton Street at said point during the month of September last, but the person making such count was not produced as a witness; however, it was conclusively proved that the city in the immediate vicinity of Easton Street is well developed and there is a great deal of vehicular and pedestrian traffic over the said street at this proposed crossing.

There are three large schools on this street, one public and two parochial. The parochial schools are conducted in conjunction with churches in that vicinity. Both the schools and the churches are largely attended.

The large manufacturing plants of the Barber Asphalt Paving Company, American Smelting and Refining Company, United Lead Company, Standard Underground Cable Company, Raritan Copper Works and Roessler & Husslucher Chemical Company are in this region, and a great number of their employees live in the vicinity of Easton Street and use it in going to and from their work.

There seems to be no serious dispute that this section of the city requires an additional crossing for its necessary growth and development. The density of the population in the vicinity makes a crossing at Easton Street a public necessity.

At present Hall Avenue is the only crossing over said railroad tracks north of William Street, and the crossing at William Street is a distance of 1,800 feet southerly from the crossing at Hall Avenue. Easton Street is about 860 feet northerly from Hall Avenue.

Without the crossing at Easton Street it is necessary for all travel from the northerly or Maurer section of Perth Amboy to travel south as far as Hall Avenue to cross the railroad tracks to reach any point on the westerly side. This necessitates their traveling more than 1,700 feet further than the proposed grade crossing over Easton Street would require.

Schedule of Rates—Egg Harbor City Water Co

Another matter of great importance is that fire protection for all this section of the city is furnished by fire apparatus housed east of the railroad track. The grade of the bridge over the Central railroad is so steep as to make it impossible for the fire engines to go over it.

This leaves Hall Avenue as the only thoroughfare for use by the fire department at times of fire.

It has frequently happened, according to W. C. Wilson, that the fire apparatus has been blocked at Hall Avenue. Such happenings make the fire hazard great and should be relieved. The crossing would help considerably in that particular.

The Board, after consideration of the testimony produced at the hearing, grants permission for the construction of the public highway known as Easton Street, in the City of Perth Amboy, across the tracks of the Perth Amboy and Woodbridge Railroad Company, now leased and operated by the Pennsylvania Railroad Company at grade.

Dated February 28th, 1917.

No. 409.

IN THE MATTER OF THE APPLICATION OF THE EGG HARBOR CITY
WATER COMPANY FOR APPROVAL OF NEW SCHEDULE OF
RATES.

Joseph Butterhof and A. C. Geller, for the company.

G. Arthur Bolte, for objectors.

The only question pending is as to the minimum charge to be exacted for the smallest size meter for domestic use. It is proposed to abandon the use of one-half-inch meters and to increase the minimum charge. In view of all of the circumstances in this case, we conclude that the charge for the smallest size meter

Service—Clayton-Glassboro Water Co.

should not exceed the present rate of ten dollars per year. The proposed schedule in this respect is not approved. The proposed change in rates for measured service is approved.

Dated March 6th, 1917.

No. 410.

IN THE MATTER OF THE HEARING WITH REGARD TO WATER PRESSURE SUPPLIED IN GLASSBORO BY THE CLAYTON-GLASSBORO WATER COMPANY.

Following hearing on complaint of inadequate supply of water for fire protection the water company is advised of changes and improvements required to be made to increase pressures.

S. H. Beckett, for Township Committee of Glassboro Township.

W. H. Roth and *J. F. Tatem*, for company.

As a result of two disastrous fires, counsel for the Township of Glassboro appeared before the Board and requested that conditions, with regard to pressures under which water is supplied in Glassboro, be investigated. In accordance with this request, hearing was held in Glassboro on Friday, March 2d, at which a large number of witnesses testified with regard to conditions as to water pressure. The general conclusions to be derived from the testimony are that pressures appear to have been satisfactory in the opinion of the firemen and others up to some two or three years ago, the exact time not being definitely stated. In the last two or three years, however, pressures appear to have been insufficient for proper fire purposes. Testimony with regard to these matters was somewhat confusing, especially as to specific dates on which service had been inadequate.

The Clayton-Glassboro Water Company operates a plant drawing water from wells located in the southeastern portion of Clay-

Service—Clayton-Glassboro Water Co.

ton. Water is pumped into the mains in Clayton; thence through an 8-inch transmission main about three miles in length running northward to Glassboro. There are really two distribution systems, one located in Glassboro, the other in Clayton. Connected with the Clayton system is a tank located on a tower and having a capacity of 92,000 gallons. There is also a tank located at the northern boundary of Glassboro, having a capacity of 132,000 gallons. In the pumping plant are located two pumps, each with a capacity of 500,000 gallons in twenty-four hours. The maximum capacity of each of these pumps is approximately 400 gallons per minute, although it is customary in the operation of the plant to run one pump at a speed corresponding to a delivery of about 200 gallons per minute. In case of fire the pump in operation has been speeded up so as to deliver an estimated quantity of about 215 gallons per minute. In the operation of the plant one pump is ordinarily run from six or seven o'clock in the morning until midnight. During the balance of the twenty-four hours it is not customary to run the pumps. The custom has been to pump directly into the system until the Clayton tank is filled, at which time the Clayton tank is closed off and the excess water then rises in the Glassboro tank located three and a half miles from the pumping plant. The normal consumption of water in Glassboro, and the higher elevation of the top of the Glassboro tank, which is 15 feet higher than the top of the Clayton tank, account for the fact that practically no water enters the Glassboro tank until after the Clayton tank is filled. It is apparent that in times of excessive draft the level of the water in the Glassboro tank might frequently be lowered under present operation.

To prevent the water flowing back toward Clayton at a time when draft is light and pumps are not running, a check valve is located between Clayton and Glassboro. On the occasion of the latest fire in Glassboro, it appears that the recording gauge, located in the superintendent's office in Glassboro, was incorrect to the extent of about nine pounds. This accounts for the fact that on the occasion of the recent fire there was no water at all in the Glassboro tank, and the entire supply for the fire had to be furnished through the three miles of eight-inch line from Clayton at a pressure corresponding to the Clayton tank pressure, which was

Service—Clayton-Glassboro Water Co.

about fifty pounds at Clayton. The calculations show that under no circumstances could an adequate pressure have been obtained under the conditions existing at the time of the fire.

On the other hand, if the Glassboro tank is kept reasonably full of water, fire service in Glassboro ought to be fairly efficient, especially if the pump at Clayton is speeded up to its maximum speed during the time of the fire. In such a case there should be available in the center of Glassboro at least 1,000 gallons per minute at a hydrant pressure of fifty pounds, and under these circumstances it ought to be possible to get four satisfactory fire streams at almost any point in the built-up portion of the town.

It was suggested at the hearing, and this has since been acquiesced in by the company, that a better plan of operation would be to commence the daily pumping program by shutting off the discharge into the Clayton tank and allowing all of the excess water to fill the Glassboro tank, after which time Clayton tank would be allowed to fill. The average pressure, not only in Glassboro but also in Clayton, would be considerably increased by this program and the costs of operation would not be affected.

CONCLUSIONS.

After due consideration of the testimony, the Board concludes:

(1) That the pumping plant should be operated in the way suggested—that is, by closing off the Clayton tank when the pumping program for the day is first commenced and pumping directly into the mains, so that water in excess of the normal use will rise in the Glassboro tank, and that, when the Glassboro tank is filled, the Clayton tank will be opened and allowed to fill.

(2) That whenever a fire occurs the pumping plant should be immediately notified and the pump speeded up to a speed corresponding to a delivery of at least 350 gallons per minute in order to supplement the pressure and reduce as much as possible the lowering of the water in the tanks.

(3) If a fire occurs in Clayton when the tank is closed, the valve controlling the supply into the Clayton tank is to be immediately opened.

Depreciation Account—Burlington County Transit Co.

(4) If a fire occurs in Glassboro, and there is no fire in Clayton at the same time, the valve controlling the delivery into the Clayton tank is to be immediately closed, so that the full effect of the pumps may be used to deliver water into the line leading to Glassboro.

If the company accepts the foregoing conclusions for its operation no order will be entered, otherwise an order will enter.

Dated March 12th, 1917.

No. 411.

IN THE MATTER OF CARRYING BY THE BURLINGTON COUNTY
TRANSIT COMPANY OF A DEPRECIATION ACCOUNT AND THE
FIXING OF PROPER AND ADEQUATE RATES OF DEPRECIATION.

A street railway is ordered to fix a proper and adequate rate of depreciation, the amount to be fixed being determined and stated by the Board.

George Evans and Armitt H. Coate, for the company.

On January 1st, 1913, a uniform system of accounts for street railways became effective by order of the Board. The classification includes the following:

Account 214—"Accrued Amortization of Capital:

"To this account, or to appropriate sub-accounts hereunder, shall be credited such amounts as are charged from time to time to 'Operating Expenses,' or other accounts to cover depreciation of way and structures, depreciation of equipment and other amortization of capital.

"When any capital is retired from service, the original money cost thereof (estimated, if not known; where estimated, that fact and the facts upon which the estimate is based should be stated in the entry), less salvage, should, except as provided under 'Property Abandoned,' be charged to this account and the amount originally entered or contained in the charge to any fixed capital account with respect to property going out of service should be credited to that account, any necessary adjusting entry being made to the appropriate sub-account under the account 'Corporate Surplus or Deficit.'"

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Account 426—"Depreciation of Way and Structures:

"Charge to this account monthly or quarterly the amount estimated to be necessary to cover such wear and tear, obsolescence and inadequacy as have accrued during the period on all way and structures of the accounting corporation less an amount equal to the sum of the amounts charged during that period to the various repair accounts in 'Maintenance of Way and Structures.'

"Note: Until otherwise prescribed, the 'amount estimated to be necessary to cover such wear and tear and obsolescence and inadequacy as have accrued during' any month shall be based on a rule to be determined by the accounting corporation. Such rule may be derived from consideration of the said corporation's history and experience. A general statement of the rule in use by each company, together with the general information upon which it is based, is to be filed with the Board of Public Utility Commissioners."

Account 442—"Depreciation of Equipment:

"Charge to this account monthly or quarterly the amount estimated to be necessary to cover such wear and tear, obsolescence and inadequacy as have accrued during the period on all equipment less an amount equal to the sum of the amounts charged for that period to the various repair accounts in 'Maintenance of Equipment.' See note under Account 426."

Following the promulgation of the general order prescribing a system of accounts for street railways, rules called for in the note above were duly filed with the Commission. Such a rule was filed by the Burlington County Transit Company, but the accounts of the company did not show any entries conformably to such rule. This condition was called to the attention of the Board in a report from its statistician and accountant, under date of March 22d, 1915, the result of which was the filing by the company on May 19th, 1915, of a rule reading as follows:

"We have adopted, as of January 1st, 1915, a plan of charging to depreciation account 2% per car mile for way and structures and 2% for equipment."

It afterward developed that the company's intention was to set aside two cents per car mile for each of the two purposes. The Board did not rule upon the adequacy of this amount.

It appeared later that the company had made no real attempt to set up a depreciation account, based upon the filed rule, and the attention of the company was again called to the necessity for the observance of this rule.

Under date of December 19th, 1916, the Board, by resolution, called a hearing for the purpose of determining the rates for de-

 Depreciation Account—Burlington County Transit Co.

preciation to be set up by this company. At the hearing testimony was submitted by the company and by the Board's chief inspector of its utilities division and its statistician and accountant. - Just prior to the hearing the company filed a new rule, reading as follows:

"There shall be charged to depreciation of way and structures, monthly, an amount equal to 1% of the physical value of way and structures, estimated at \$73,500, less an amount equal to the sum of the amounts charged during the month to the various repair accounts in maintenance of way and structures.

"There shall be charged to depreciation of equipment, monthly, an amount equal to 1% of the physical value of the equipment estimated at \$29,200, less an amount equal to the sum of the amounts charged during the month to the various repair accounts in maintenance of equipment."

At the hearing the company testified that its estimates for depreciation were as follows:

Renewal of ties and roadway.....	\$5,625.00
Track and overhead	2,000.00
Rolling stock	1,500.00
Power Plant Equipment.....	500.00
Total	<u>\$9,625.00</u>

In connection with the first item, it was brought out that this was to cover the annual replacement of about 4,500 ties, together with the work of installation. The entire line is about 15 miles in length and includes about 35,000 ties. Experience of this company shows the ties to have an average life of about eight years, and this would require the replacement annually of a little more than 4,000 ties. Considerable work has been done in the past two or three years to better the track and roadway, and it is expected that the installation of 4,500 ties per annum for a few years will result in putting and maintaining the track and roadway in satisfactory condition. Between eight and nine thousand ties were renewed during 1916.

The small sum allowed for power plant is due to the fact that the use of the generating plant has been discontinued, the company purchasing its current from the Public Service Railway Company and being now required to maintain merely a substation. The value of the depreciable physical property is esti-

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mated by the company at \$102,700. The company estimates that the depreciation of 10 per cent. per annum is reasonable and this will amount to \$10,270.

The present schedule of the company calls for approximately 250,000 car miles per annum. On the basis of five cents per car mile this would amount to \$12,500. Comparing these estimates, and the amount which the company is allowing, with the actual expenditures of 1916, it should be noted that the number of ties replaced in 1916 was about twice the average. A disastrous fire, the same year, destroyed nearly all of the company's rolling stock.

To meet any extraordinary expense the company set aside \$5,000 which has been kept intact as a part of the depreciation reserve. Testimony submitted by the Board's statistician showed that the average expenditure for the past five years for depreciation and repairs of way and structures, was 3.7 cents per car mile, and that the cost for repairs to equipment was 2.1 cents per car mile, making a total of 5.8 cents per car mile.

As stated, the heavy expenditures during the past five years have been due to the necessity of almost entirely rebuilding the way and structures, and due further to the heavy cost of maintaining cars which had been long in service. Now, that the track and roadway have been very materially improved, the expensive power plant has discontinued operation, and new cars are in use, the annual allowance need not be so great, and it would appear that if the company expends each year during the next few years the amount which it now thinks is reasonable, i. e., \$9,625 per annum, the property should be kept in such condition as will enable the company to furnish safe, proper and adequate service. The total set aside in accordance with the wording of the rules regarding depreciation amounts to about \$12,000. Against this would first be charged the expenditures for ordinary maintenance, but on the whole this amount would appear to be sufficient for all present purposes.

In view of the failure of the company to live up to its own filed rules in the past, an order will be entered fixing a proper and adequate rate of depreciation of its property. The amount which the Board finds to be a sufficient rate required, above the expense of

Depreciation Account—Burlington County Transit Co.

maintenance, to keep the property of the Burlington County Transit Company in a state of efficiency, corresponding to the progress of the industry, is the sum of nine thousand six hundred and twenty-five dollars (\$9,625.00), to be provided annually out of earnings. In the judgment of the Board the sum necessary for expenditure for ordinary maintenance, added to the sum of nine thousand six hundred and twenty-five dollars (\$9,625.00), fixed as a depreciation fund, would approximate the sum of twelve thousand dollars (\$12,000.00).

Dated March 13th, 1917.

ORDER.

This matter having been duly heard; the Board having on the date hereof filed a report, which said report is hereby referred to and made part hereof, and the Board having heretofore required the Burlington County Transit Company to adopt a uniform system of accounting providing for the carrying of a depreciation account, the Board ascertains and determines as a proper and adequate rate of depreciation to be observed by the Burlington County Transit Company the sum of nine thousand six hundred and twenty-five dollars (\$9,625.00) to be provided annually out of earnings of said company; the said sum so provided being, in the judgment of the Board, sufficient to provide the amounts required over and above the expense of maintenance to keep the property of the Burlington County Transit Company in a state of efficiency corresponding to the progress of the industry in which it is engaged, and the Board

HEREBY ORDERS the sum of nine thousand six hundred and twenty-five dollars (\$9,625.00) fixed as a proper and adequate annual rate of depreciation of the property of the Burlington County Transit Company.

Dated March 13th, 1917.

South Amboy vs. Public Service Gas Co.

No. 412.

CITY OF SOUTH AMBOY

vs.

PUBLIC SERVICE GAS COMPANY.

Complaint is made of refusal to supply gas. The respondent denies that service was refused, but states that because extensions of mains were required to what were considered to be unreasonable distances deposits were insisted upon. Following hearing the Board fixes terms upon which service will be ordered.

H. P. Coakley and F. P. Coan, for the municipality.

L. D. H. Gilmour, for the respondent.

In this matter the City of South Amboy complained, under date of November 28th, 1916, that the Public Service Gas Company failed or refused to extend its mains to furnish service to various individuals residing in the City of South Amboy who had applied for gas service.

Specifically, the complaint is to the effect that John French, of Fourth Street, William Creed, of Conover Street, and Charles Young, of Highland Street, each applied to the company at its South Amboy office for service, but that same was refused.

It is further stated that subsequently the said French, Creed and Young again applied and were "met with a demand for a deposit of cash with said company, the same to be repaid to the said consumers on the happening of various contingencies and at various times in the discretion of the said Public Service Gas Company."

The answer of the company was to the effect that it did not refuse service to these applicants, but because of extensions of mains required, to what were considered unreasonable distances, deposits had been demanded as follows:

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John French, of Fourth Street, was asked to make a deposit of \$120, under the company's form of refund agreement, which provides that refunds shall be made at the rate of \$50 per house for each additional house connected to the company's mains and using gas. The entire amount would be finally refunded when sufficient number of houses were constructed and served from the same extension.

William Creed and one other, on Conover Street, would be supplied on the same general conditions if a deposit of \$100 was made.

Charles Young and one other would be supplied if they would make a deposit of \$100 under the same general form of agreement.

As these terms were not acceptable to the complainants, the matter was set down for hearing on January 23d and continued to February 7th.

To supply the residence of Mr. Creed an extension would be required of the existing 4-inch main on Fourth Street. At the hearing it developed that another customer could be supplied from this extension, and the company agreed to make the extension for the two customers without requiring any special guarantee.

With regard to the extension to serve Mr. French, testimony showed that it would be necessary to extend the existing main on Fourth Street westward a distance of 284 feet. From this extension but one other customer can be supplied at the present time. Mr. French's residence is piped for gas and has a fixture installed in the dining-room. Complainant stated that additional fixtures would be installed and that gas would be used for cooking and heating water. The estimated revenue from this one house is \$22.50, and the estimated cost for furnishing the service, including fixed charges on the cost of the extension, and also on the value of the proportionate amount of existing plant required in furnishing service, is \$33.57.

In connection with this extension to supply Mr. French, it was suggested that the extension be made from the main on Fifth Street along Thompson Street. It was also suggested that a main might be laid on Fourth Street in the opposite direction connected to the existing main on Feltus Street. While each of these exten-

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sions would be somewhat shorter than the extension in Fourth Street, the prospect of obtaining additional customers is not as good, as the main on Thompson Street would run parallel to the lot line and there would probably never be additional customers connected to it, as all additional houses on this line would be connected to the mains in either Fourth or Fifth Streets. The extension from the main on Feltus Street eastward would require at least 250 feet of pipe, and the prospect of additional customers is not as good as it would be if the extension was made from Fourth Street.

In the case of Charles Young, who applied for an extension on Highland Street, testimony and further investigation made by the Board's gas engineer, show that it would be necessary to extend the main on Highland Street southward for a distance of about 240 feet. If this extension was made there is one other customer who could be supplied from it, and a further extension of about 160 feet would provide two additional customers, so that four customers could be supplied from an extension of 408 feet. The company offered to make this extension if a deposit of \$100 was made, which would be returned when two additional houses were connected to the extension. It is estimated that the annual revenue from these four houses would amount to \$72, and that the total cost of furnishing service, including fixed charges on the additional investment and on the investment in that portion of existing plant required to furnish these customers, would be \$82.

It appears that there are three houses located on the east side of Prospect Street, which is the next street parallel to Highland Street on the west, that could be supplied from a main on Highland Street, provided the service pipes are run over the lots in the rear of these houses and connected to the proposed Highland Street main. There are two one-family houses and one double house which could be supplied in this manner, and it appears that these houses are situated on lots which run through from Prospect Street to Highland Street, the average depth of the lots being 140 feet, so that service pipes would be required from 100 feet to 120 feet in length to supply these houses. None of these houses is piped for gas and all are using coal ranges for cooking and heating water. There appears to be some doubt as to whether the owners

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of the two single houses would pipe their houses for gas provided they could be served from the Highland Street extension. The owner of the double house has stated that he will pipe his house for gas and also pay for the service line from his house on Highland Street. To serve these additional houses will require a total extension of about 450 feet of main. If these four houses could be supplied from the Highland Street main, in addition to the two other houses referred to in the previous calculations, the estimated annual revenue would be about \$110. The cost of furnishing service, including fixed charges on the cost of the extension, and on that portion of existing plant required in furnishing service to these customers, would be about the same in amount, and it is the opinion of the Board that the proposed Highland Street main ought to be extended 450 feet if all of the six houses are connected as *bona fide* customers of the company, or if those who actually apply for service will assure a revenue of \$110.

If the proposed Highland Street line to supply Charles Young and others was still further extended to a distance of 483 feet, it appears that eight prospective customers could be served. The estimated revenue from this extension, providing eight customers are connected, is \$144, and the estimated cost of serving the eight customers almost exactly the same amount. It is the opinion of the Board that the proposed Highland Street main ought to be extended 483 feet if the eight who may be served will become *bona fide* customers of the company, or if those who actually apply for service will assure a revenue per annum of \$144.

As the company has agreed to extend the main to supply Mr. Creed, no order or recommendation appears to be necessary.

With regard to the extension to supply Mr. French and one other, it appears that if the company receives proper application from these two parties, it would be fully justified in making the necessary extension, and it is RECOMMENDED that upon receipt by the company of *bona fide* applications for service the mains be extended so as to furnish these applicants with gas. If Mr. French only is to be supplied from this extension, he should be furnished with service if he will assure to the company a revenue of \$33.50 per annum.

With reference to the extension on Highland Street to supply Mr. Young and others, it is RECOMMENDED that the main be ex-

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tended approximately 450 feet if *bona fide* applications are received from six customers who can be served from this extension or if an assurance of an annual revenue amounting to \$110 is given. As an alternative to this latter recommendation, it is RECOMMENDED that the main be extended a distance of 483 feet if the eight customers who could be served will sign *bona fide* applications for service, or if those who are served will assure to the company an annual revenue of \$144.

If the company does not accept the above recommendations the Board stands ready to issue an order requiring the extensions to be made upon the receipt by the Board of satisfactory evidence that the requisite number of *bona fide* applications have been made for gas service on each of the extensions referred to above.

Dated March 19th, 1917.

No. 413.

ROSS MILLER ET AL.

vs.

THE MERCHANTVILLE WATER COMPANY.

Kates & Burling, for the complainants.

W. E. Wymer, Jr., for Pensauken Township.

M. B. Rudderow, for the company.

ORDER.

The Board after hearing FINDS that the Merchantville Water Company should establish, construct, maintain and operate an extension of its existing facilities in the Township of Pensauken, to wit:

B. J. Whittaker vs. Hackensack Water Co.

Out Westfield Avenue, across Derousse Avenue to Morrisville Avenue; thence northerly on Morrisville Avenue to the last house now built in the Morrisville section of the said Pensauken Township, and so ORDERS.

In the judgment of the Board such extension would be reasonable and practicable and would furnish sufficient business to justify the construction and maintenance of the same, and the financial condition of the Merchantville Water Company reasonably warrants the expenditure required in making and operating such extension, provided a contract or contracts are entered into with the Merchantville Water Company which will give to the said company assurance of an annual revenue of \$264, in addition to revenue of \$25 each from three fire hydrants, making a total revenue, from the extension, of \$339.

The work contemplated by this order shall be completed not later than August 31st, 1917.

This order shall become effective April 20th, 1917.

Dated March 19th, 1917.

No. 414.

B. J. WHITTAKER

vs.

HACKENSACK WATER COMPANY.

Complainant agreed to guarantee the Hackensack Water Company an annual revenue of ten cents per lineal foot of pipe laid to afford him service. Later, 153 feet of the extension was used by the company to improve its service. Claim is made and supported by the Board that a deduction should be made in the guarantee, corresponding with the length of pipe used by the company.

B. J. Whittaker, in person.

Henry L. DeForest, for the company.

B. J. Whittaker vs. Hackensack Water Co.

On January 15th, 1917, B. J. Whittaker filed a complaint stating the Hackensack Water Company had cut off the water-supply to his house, located on the south side of New York Avenue, in Dumont, New Jersey, leaving his tenants without water, although the water rent had been paid. An investigation was immediately made by one of the assistant engineers of this Board who recommended that an adjustment be made in the amount of the existing annual guarantee of complainant for service by reducing it to \$14.40 per annum. At the request of the company the matter was set down for formal hearing before the Board.

At the hearing it appeared that on November 16th, 1911, the Hackensack Water Company extended its mains eastward on New York Avenue for a distance of 153 feet, thence northward on Brook Street a distance of 144 feet, a total of 297 feet for the purpose of supplying the complainant's house on Brook Street with water. When this extension was installed the complainant agreed to assure the company an annual revenue, for the extension so made, of \$29.40.

The company's rules provide that when the cost of furnishing service to a customer, or a number of customers, is in excess of the revenue which the company will derive from an extension, the applicant or applicants shall agree to pay annually in advance, in addition to the established rates of the company, an amount that shall, together with such rates, equal 10 cents per lineal foot of pipe laid.

In accordance with this rule the company demanded the guarantee of \$29.40 per annum from the complainant when the extension known as No. 3916 was installed. This guarantee was to continue until the regular and normal revenue from the customer or customers who can be served from the extension is equal to the amount of the guarantee.

Another house owned by Mr. McDermott, but formerly owned by the complainant, and situated on Brook Street to the north of the first house, was also connected by long service pipe to this extension, and the revenue derived by the company therefrom credited to the amount guaranteed on extension No. 3916.

On September 2d, 1913, the water company extended its main northward in Brook Street for a distance of 200 feet for the pur-

B. J. Whittaker *vs.* Hackensack Water Co.

pose of supplying the properties of Mr. McDermott and Mr. McNeill with independent service, and received annually \$20 on this further extension known as No. 4449. The company then insisted that the complainant was required to continue the guarantee of \$29.40 on extension No. 3916.

The company, for reasons of its own and under extension guarantees, had extended its main in New York Avenue to a point distant 159 feet westerly from the middle of Thompson Street. This left a distance of 177 feet between the dead end in New York Avenue and the part of extension No. 3916 at the junction of Brook Street and New York Avenue. The company connected these two points of its 6-inch main, so tying in what was practically two dead ends, and thereby improved the circulation and bettered the service conditions in this vicinity. In so doing they used 153 feet of extension known as No. 3916 on which Mr. Whittaker had been paying an annual guarantee. If there were no consumers of water on Brook Street north of New York Avenue it would seem not only good judgment but very desirable that the water company should connect two dead ends in its 6-inch service main which were only 330 feet apart. Such an improvement of the company's service should be borne by it, and the complainant is justified in feeling that he should be relieved proportionately of his annual guarantee. With these undisputed facts it would appear that the amount of complainant's guarantee should be reduced by the 153 feet of the extension just spoken of, which, as now used, is for the purpose of bettering and improving the water in the company's mains at the location referred to. It seems to be an adjustment which common fairness requires. This is particularly true in view of the change resulting from the change of service to the McDermott house.

It is, therefore, RECOMMENDED that the company make an adjustment with the complainant so that the amount of his annual guarantee shall be reduced to 10 cents per lineal foot for the 144 feet of main now used and necessary for his service to the Brook Street property.

Dated March 20th, 1917.

Rehearing—Rates—Burlington Sewerage Co.

No. 415.**IN THE MATTER OF THE APPLICATION OF THE BURLINGTON SEWERAGE COMPANY FOR REHEARING ON THE QUESTION OF APPROVAL BY THE BOARD OF A NEW SCHEDULE OF RATES.**

1. Following hearing by the Board of an application for approval of a new schedule of rates the local taxes of the utility were increased.

2. Rehearing asked for on the question of approval of the rate. Schedule is rejected, but permission is given to file a schedule of rates with increases sufficient to cover the additional taxes.

Ernest Watts, for Burlington.

J. Fithian Tatem, for the company.

On March 22d, 1916, the Board filed a report on the application of the Burlington Sewerage Company for approval of a new schedule of rates, which schedule proposed increases in the company's charges. Following the filing of this report application was made for rehearing and a date fixed for argument on the question of such rehearing. After consideration the Board is of the opinion that the matter should not be reopened for further hearing.

In its former report the Board held that, although the rate of return on the company's property at the valuation assumed for the purposes of that report was low, it was not confiscatory, and because of the obligation of the company to furnish service at specified rates it would not allow an increase.

It appears that since the former hearing the municipality of Burlington increased the taxes about \$800. This increase in taxation it seems was based upon the valuation of its property which the company presented in this proceeding.

The imposition of the additional assessment is, in effect, a penalty which the company has had to pay as a consequence of the appeal to this Board for an increase in rates. The result is that what was admittedly a low rate is now reduced to what may be a confiscatory one.

Rehearing—Rates—Burlington Sewerage Co.

We think the company should be allowed an increase in rates sufficient to return additional income to the amount of the added assessments imposed by the municipality since the hearing. The imposition of the new assessment leaves the company with a net return upon its property of a little over one per cent. instead of two and one-half per cent., which the Board found inadequate, but not confiscatory, and which it refused to increase because of the contract between the city and the company as to maximum rates. The city is not in a position to complain of an increase in rates sufficient to pay the added burden in taxes. It can be seen that the company would soon be taxed into insolvency if it were not permitted to earn the amount of the increased taxes. The report expressing disapproval of the schedule of rates heretofore filed is reaffirmed, except to the extent of allowing an increase sufficient to pay the increased taxes referred to herein. The company may file a new schedule in accordance with this report.

Dated March 21st, 1917.

DISSENTING OPINION.

By COMMISSIONER DONGES:

For the reasons given in the report filed by me in this case on original hearing, I vote to deny a rehearing and any change in the existing tariffs.

Dated March 21st, 1917.

ORDER.

The Burlington Sewerage Company having by letter to the Board dated June 27th, 1914, submitted a new schedule of rates proposing increases in its charges for service, and the Board having investigated the questions of the reasonableness of the proposed increases, and of its power to grant the same, and having on March 22d, 1916, and March 21st, 1917, filed reports containing its findings of fact and conclusions thereon, which said reports are hereby referred to and made parts hereof, the Board disapproves the proposed new schedule of rates referred to herein; and

Rates—Collingswood Sewerage Co.

'IT IS HEREBY ORDERED that the application made to the Board for its approval of said schedule be and the same hereby is DISMISSED.

Dated April 4th, 1917.

No. 416.

IN THE MATTER OF THE APPLICATION OF THE COLLINGSWOOD SEWERAGE COMPANY FOR APPROVAL OF A NEW SCHEDULE OF RATES.

Wescott & Weaver, for Collingswood.

J. Fithian Tatem, for the company.

For the reasons stated in the matter of the Burlington Sewerage Company application, the company will be allowed to file a new schedule of rates, sufficient to earn an additional return to the amount of the taxes imposed by the municipality since the former report and order in this matter.

The order heretofore entered, denying the increase in rates is reaffirmed, except to the extent of allowing an increase sufficient to pay the increased taxes referred to herein.

Permission to file a new schedule as above suggested is granted.

Dated March 21st, 1917.

DISSENTING OPINION.

BY COMMISSIONER DONGES:

Application was made by the company for further consideration of its petition for leave to increase rates. The Board, on such rehearing, approved a limited increase of rates, but denied the general advance prayed for. An appeal from such finding now ap-

Rates—Collingswood Sewerage Co.

pearing certain, I feel it is due to the parties interested and to the court to express more fully the consideration which moved me to vote to deny any of the increases sought by the company.

(1) The first question to be considered is whether this Board has power to fix rates in disregard of ordinances and contracts of municipalities fixing such rates in the absence of legislative authority to enter into an irrevocable contract.

The jurisdiction of the Board as a legislative agent to supervise and regulate utilities, both as to service and rates, has been dealt with by the Board in numerous cases. See *Butler vs. Butler Water Co.* (Reports, Vol. II., p. 111); *Re Approval Rates of Wildwood Water Works Co.* (Reports, Vol. II., p. 447); *Van Riper Mfg. Co. vs. Passaic Water Co.* (Reports, Vol. III., p. 253).

In the case of *Butler vs. Butler Water Co.*, the Board said, referring to the power of the Board to disregard the provisions of a municipal ordinance claimed to establish a contract between the municipality and a utility:

"The municipality in imposing the terms contained in the ordinance simply acted as an agency of the State. The legislature might directly abrogate, modify or alter, so far as the municipality is concerned, the terms imposed by the municipality. While the legislature has not done this directly, yet it has by the creation of this Board with powers stated constituted a body whose orders in fixing just and reasonable rates, setting standards of adequate and proper service and establishing just and reasonable practices, rules and regulations may indirectly have that result."

This view is supported by decisions of the New Jersey Supreme Court in several cases; notably in *Public Service Railway Co. vs. Board of Public Utility Commissioners et al.*, 85 N. J. Law 123; *State, Inhabitants of Phillipsburg et al., vs. Board of Public Utility Commissioners et al.*, 85 N. J. Law 146.

In the Phillipsburg case the Supreme Court, speaking through Mr. Justice Minturn, held—

"The power conferred upon the Town of Phillipsburg to regulate the exercise of the franchise of the railroad company within the town is in the nature of a police power which may be modified or repealed by the legislature as public expediency may require.

"The fact that the town in the exercise of the power to regulate, passed an ordinance which the railroad company accepted as a condition upon which it

Rates—Collingswood Sewerage Co.

might exercise its franchise, does not constitute a contract which the town can interpose as a barrier to the exercise of its general police power in the supervision of street railways.

"The State, by conferring upon the municipality the power to regulate street railways, does not thereby deprive itself of the power by vesting general jurisdiction of the subject matter in a state board, and conferring upon it ample powers to that end, even though the effect may be, so far as the municipality is concerned, to revoke the powers conferred upon it by prior legislation."

There are numerous cases as to the effect of legislation, delegating power to a state body, upon contracts touching rates and service entered into by municipalities and utilities, whether by ordinance or otherwise, where the municipal action has not specific statutory sanction. These cases uniformly hold that the power of the State is supreme; that such power may be delegated to a commission such as this Board, and, when so delegated, the orders of the commission supersede contracts, valid when made, but later found to be in conflict with the requirements of justice and reasonableness as to rates or service.

When, therefore, the legislature vests this Board with the powers enumerated in the act, its authority, as a state agency, is superior to the power of a municipality, acting without express legislative delegation, to fix rates, set standards of adequate and proper service, and establish just and reasonable practices, rules and regulations. *Menasha Wooden Ware Co. vs. Minneapolis, St. P. & S. S. M. Ry. Co.*, 150 N. W. 411; *Manitowac vs. Manitowac and Northern T. Co.*, 129 N. W. 925; *LaCrosse vs. LaCrosse Gas and Electric Co.*, 130 N. W. 530; *Kenosha vs. Kenosha Home Telephone Co.*, 135 N. W. 848.

(2) I now turn to the question of the statutory direction to the Board to fix rates.

The statute of 1911, known as the Public Utility Act (*P. L. 1911, p. 374*), provides, among other things, that the Board shall have power—

"(c) After hearing, upon notice, by order in writing, to fix just and reasonable individual rates, joint rates, tolls, charges or schedules thereof, as well as commutation, mileage and other special rates which shall be imposed, observed and followed thereafter by any public utility as herein defined, whenever the Board shall determine any existing individual rate, joint rate, toll charge or schedule thereof or commutation, mileage or other special rate to be unjust, unreasonable, insufficient or unjustly discriminatory or preferential."

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It will be noted that the duty of the Board is to fix "just and reasonable" rates, whenever any *existing* rate is "unjust, unreasonable, insufficient or unjustly discriminatory or preferential." It is clear from this language that the Board is definitely directed to increase or decrease, as may be necessary, in order to fix a just and reasonable rate. The use of the words "*unjust, unreasonable, insufficient,*" seems to leave no room for doubt that the legislative direction to the Board is to *increase* whenever the rate is found to be "unjust and unreasonable" because "*insufficient,*" and *decrease* whenever it is found to be "*unjust and unreasonable*" because excessive.

The power and duty of the Board to inquire into the "insufficiency" of rates in this case would appear clear from a reading of the statute if the municipality had not assumed to fix the rates to be charged by the utility.

(3) What was the authority of the Borough of Collingswood to prescribe rates and what was the effect of the provision in the ordinance fixing rates?

It has been repeatedly held that the power to regulate rates is a sovereign power of the State, to be exercised by the legislature, or by an agency of the State through specific and definite authorization by the State. I think these propositions are so well settled that no serious question can be entertained concerning this soundness.

In the case of *Home Telephone Co. vs. Los Angeles*, 211 U. S. 265, 273, Mr. Justice Moody, speaking for the Supreme Court of the United States, said:

"The power to fix, subject to constitutional limits, the charges of such a business as the furnishing to the public of telephone service is among the powers of government, is legislative in its character, continuing in its nature, and capable of being vested in a municipal corporation.

"The surrender, by contract, of a power of government, though in certain well-defined cases it may be made by legislative authority, is a very grave act, and the surrender itself, as well as the authority to make it, must be closely scrutinized. No other body than the supreme legislature (in this case, the legislature of the State) has the authority to make such a surrender unless the authority is clearly delegated to it by the supreme legislature. The general powers of a municipality, or of any other political subdivision of the State, are not sufficient. Specific authority for that purpose is required. This proposition is sustained by all the decisions of this court, which will be referred to hereafter, and we need not delay further upon this point.

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"It has been settled by this court that the State may authorize one of its municipal corporations to establish by an inviolable contract the rates to be charged by a public service corporation (or natural person) for a definite term, not grossly unreasonable in point of time, and that the effect of such a contract is to suspend, during the life of the contract, the governmental power of fixing and regulating the rates. *Detroit vs. Detroit Citizens Street Railway Co.*, 184 U. S. 368, 382; *Vicksburg vs. Vicksburg Water Works Co.*, 206 U. S. 496, 508. But for the very reason that such a contract has the effect of extinguishing *pro tanto* an undoubted power of government, both its existence and the authority to make it must clearly and unmistakably appear, and all doubts must be resolved in favor of the continuance of the power."

It appears from this case, and the cases therein cited, that the power to fix rates resides in the supreme legislative body (in this State, the legislature), and may be exercised by a municipal corporation whenever there is express authorization by the legislature. But, as was said in the Home Telephone Co. case, "both its existence and the authority to make it must clearly and unmistakably appear," and "the general powers of a municipality * * * are not sufficient, specific authority for that purpose is required."

In the case of *Manitowac vs. Manitowac and Northern Traction Co.*, 129 N. W. 925, the court was dealing with the right of a municipality to adopt an *ordinance* fixing rates. The statute conferred power to fix rates by ordinance, but, instead, a *contract* was entered into. Because of the failure of the municipality to exercise the definite power delegated, which was legislative and not contractual, it was held that no statutory power had been exercised and that the State Commission might fix just and reasonable rates.

In discussing this phase of the case the court said:

"We next come to a consideration of the question of the extent to which the contract before us is binding and enforceable. That the legislature of the State might expressly empower cities to make such contracts as the one in question is well settled."

Again:

"Statutes granting to cities the right to make long time contracts binding on the public, and fixing a rate to be charged by a public service corporation, are not looked upon with favor, and will be strictly construed. It is only where the right is very clearly conferred that the State will be held to have relinquished its power to enact laws regulating tolls."

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Many cases are cited in support of the court's conclusions.

The Supreme Court of Appeals of West Virginia, in *City of Benwood vs. Public Service Commission (W. Va.)*, 83 *South-eastern Rep.* 295 (October, 1914), deals with this subject, and in a well-considered opinion says:

"Though the grant and acceptance of the franchise wherein certain rates were fixed, created a contract between the water company and the City of Benwood, the rates thereby fixed are, nevertheless, cognizable for revision by the Public Service Commission under the broad power delegated thereto, unless, prior to the delegation of those powers, the legislature had expressly delegated power to the City of Benwood which authorized the city to contract inviolably for the rates mentioned in the franchise for the period stated therein. Rate-making is a legislative act. It is inherent in and belongs primarily to the legislature. The rate-making power is a power of government—a police power of the State. The City of Benwood, at the time of the granting of the franchise, had no rate-making power that could bind the State, if the legislature of the sovereign State had not theretofore delegated the same to the city. And if such delegation or grant of rate-making power was made to the city prior to the delegation of general and state-wide powers in the same particular by the legislature to the Public Service Commission, the language relied upon as evidence of such delegation or grant to the city must be clear and express. The presumption is against exclusive delegation of the legislature's sovereign rate-making power to a municipality. Unless there has been such delegation by clear and express terms, the power is reserved in the State, which can exercise it at such times and to such extent as may be found advisable."

It is perfectly clear, then, that the power of the State over rates is supreme; that such power may be delegated by the legislature to a commission; that the power may be delegated to a municipality, but there must be clear and undoubted delegation in such case; that, unless there is prior specific delegation of the power to a municipality and an exercise of such power within the limits of the delegation, the power of a duly-authorized commission is superior to that of a municipality.

(4) In the instant case, therefore, this Board, clearly, may establish just and reasonable rates, regardless of the ordinance, unless the legislature prior to the adoption of Chapter 195, Laws of 1911, granted to the Borough of Collingswood the power to fix the rates of the sewerage company by inviolable contract.

Application for permission to use the streets of Collingswood was made in accordance with Chapter 210, Laws of 1898, page 484.

Rates—Collingswood Sewerage Co.

Section one of that act provided that not less than seven persons may organize "a company for the purpose of constructing, maintaining and operating a system of sewerage in any municipality in this State."

Section two provides as follows:

"Such persons desirous of forming a company for such purpose shall make, sign and acknowledge, before some officer authorized to take acknowledgments of deeds, a certificate in writing which shall state the corporate name adopted by the company, the amount of the capital stock, the term of existence, the number of directors, the names of those who shall manage the affairs of the company for the first year, or until their successors are elected and qualified, and the name of the municipality in or for which such sewerage system is to be constructed and the business of such company carried on; such certificate shall be filed in the office of the secretary of state, *together with the consent, in writing, of and the terms and condition or conditions upon which the consent has been granted by the corporate authorities*, if any, of the municipality in which such sewerage system is to be constructed; *provided, however*, that the corporate authorities of any municipality shall not give said written consent unless a petition shall have been presented requesting the granting of such consent, which petition shall be signed by the owners of real estate in said municipality to the extent of at least one-half of the number of persons who, in the last preceding municipal assessment of taxes, have been assessed as the owners of the real estate in all that portion of the said municipality designated as within the limits of the proposed sewerage system on the maps and specifications of the same in this act provided for."

The act then provides that when such "certificate, conditions and consent shall have been filed as aforesaid," the persons shall be a body politic and corporate, and give certain powers to it, such as the right of entry upon lands, and to condemn lands necessary for its corporate purposes.

Section twelve provides:

"Upon application to the corporate authorities of any such municipality for the consent of such authorities as provided in section two of this act, said authorities may, by ordinance, provide that such consent shall be conditioned upon the payment to such municipality of a specified sum of money, or upon the quarterly, semi-annual or annual payment to said municipality of a specified sum of money or upon payment of specified quarterly, semi-annual or annual percentage of the gross receipts of the corporation to be formed pursuant to such consent; *and said corporate authorities shall annex to such consent the maximum prices or rents that may be charged property owners or others for the use of such sewerage system*, and any further or other terms and condition or conditions upon which said consent is granted; if the certificate referred to in section two hereof be filed, there shall be annexed thereto and filed there-

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with a copy of the terms and condition or conditions upon which such consent is granted, and such filing shall be conclusive evidence that said corporation has assented to said terms and condition or conditions, and the same shall be deemed and taken to be binding and operative upon said corporation, its successors and assigns."

Section fourteen reads as follows:

"Said company may contract with property owners and others for the use of said system of sewerage for such price or prices, or quarterly or annual rents, and such restrictions as said company may think proper; *provided, that the same shall in no case exceed the maximum rates which may be named in the terms and condition or conditions on which the consent of the corporate authorities shall have been obtained.*"

The Borough Council, in compliance with the statutory direction that they "annex to such consent the maximum prices or rents that may be charged," in section two of the ordinance of March 2d, 1900, provided that the charges for sewerage service should not be less than five dollars nor more than nine dollars per year for a property containing nine rooms or less, and twenty-five cents additional for each and every room exceeding nine rooms.

The company, in section 14, is given power to contract with customers for the use of the sewerage system and the payment for such use, provided that the rates to be charged shall not exceed the maximum rates named in the terms on which the consent is obtained.

The Borough of Collingswood was expressly authorized to fix the maximum rates to be charged for the service to be rendered. To this extent there was a clear and unmistakable delegation of the State's power to fix rates. The acceptance of the franchise effected a contract between the utility and the municipality that this Board is not at liberty to disregard.

There is nothing in the act of 1911 conferring general power upon this Board to regulate rates to indicate a purpose on the part of the legislature to repeal the act of 1898 under which the municipal consent was granted, or that the power delegated by the latter act was to be superseded by the orders of this Board. The power of this Board in the premises is to fix and establish just and reasonable rates that are within the maximum allowance established by the municipality in its consent. This conclusion is con-

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sistent with the acts of the legislature and gives force to the acts adopted by it. To conclude otherwise, would be to utterly disregard the statutory direction to the municipality. There is nothing to indicate that a municipality would not now, if application were made under section two of the act of 1898, be required to establish the limits of charges to be made. That provision appears to be still in effect.

In view of the power delegated to the municipality to fix a maximum rate for a sewerage service, which "shall be deemed and taken to be binding and operative upon said corporation," I conclude that a schedule providing for rates in excess of such maximum cannot be approved.

I do not deal with the question as to whether the act of 1898 is unconstitutional on the ground that it delegates the rate-making power without any limitation of time.

In the report filed by me in the original Burlington sewer rate case, I indicated my opinion that the determination of the validity of a statute is not within the province of this Board but is the function of the courts.

In my judgment the same position must be taken with respect to the validity of an ordinance adopted in conformity with the provisions of a statute.

The conclusion reached renders it unnecessary to consider whether present rates or those provided for in the supplemental report of the majority of this Board are adequate for the service rendered, since under this conclusion as before stated this Board is without authority to sanction any increase beyond the maximum established by the ordinance.

Dated March 21st, 1917.

ORDER.

The Collingswood Sewerage Company having by letter to the Board dated June 20th, 1914, submitted a new schedule of rates proposing increases in its charges for service, and the Board having investigated the questions of the reasonableness of the proposed increases, and of its power to grant the same, and having on March 22d, 1916, and March 21st, 1917, filed reports containing

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its findings of fact and conclusions thereon, which said reports are hereby referred to and made parts hereof, the Board disapproves the proposed new schedule of rates referred to herein; and

IT IS HEREBY ORDERED that the application made to the Board for its approval of said schedule be and the same hereby is DISMISSED.

Dated April 4th, 1917.

No. 417.

F. J. CRICK

vs.

ROCKLAND ELECTRIC COMPANY.

Complaint was made of refusal of electric utility to supply service. The Board finds the cost would be too great to justify the Board in ordering it. Recommendation is made that service be extended to supply complainant on terms fixed by the Board as reasonable.

F. J. Crick, in person.

Mortimer B. Patterson, for the company.

The complainant, a resident of the eastern part of Allendale, alleges that for some time he has been trying without success to obtain electric light service from the Rockland Electric Company. This matter was first reported upon by an inspector of the Board under date of December 9th, 1916. The inspector's report stated that to furnish electric light service to complainant's residence on East Crescent Avenue, it would be necessary to extend the primary lines several hundred feet and that the total investment would be \$210.60. The cost of furnishing service to Mr. Crick, including fixed charges, was estimated at \$45.78, this being based on an estimated consumption of 200 kilowatt hours. The estimated reve-

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nue at the company's net rate of 12 cents would be \$24, and in view of the excess of cost over the estimated revenue it was reported that the Board would not be justified in ordering the extension of service under these conditions unless Mr. Crick and others who might be served would assure an amount of revenue sufficient to warrant the construction of the line.

Mr. Crick was not satisfied with this report, believing that service might be furnished from the north instead of from the south as proposed by the company, and that if the line should be extended from the north there were certain additional customers who could be served.

It appears that the company had not given serious consideration to the possibility of furnishing service from the north, believing there was no real demand for service by those living along that part of the road. Testimony concerning these matters was taken at a hearing before the Board on February 21st, at which Mr. Crick was present and the company was represented. Testimony was submitted by Mr. Crick and by Mr. Loshen. Their testimony developed the fact that the Borough of Ramsey would probably install four street lights along the line coming from the north and that in addition to the residences of Messrs. Crick and Loshen there would be along the line six residences owned by Mr. Charles May, Mr. Van Ben Schoten, Mr. Peterson, Mr. Shaughnessy, Mr. Rouse and Mr. Houlin.

On cross-examination it developed that the seven prospective customers, other than Mr. Crick, had not made actual application, at least not recently. Mr. Van Ben Schoten had taken up the matter some three years ago, but it had not been pressed.

The extension of the line from the north to supply the eight possible customers referred to, and the street lighting which it is expected the Borough of Ramsey would ask for, involves construction costs amounting to \$1,466.79. It is estimated that the current consumed by these prospective customers would be 1300 kilowatt hours. The total cost of furnishing the service, including the fixed charges on the investment and the manufacturing cost for electrical energy, is estimated at \$493.30.

In addition to the above cost of construction, as five of the prospective customers are located at some little distance back from

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the road, there would be special charges for the excess in length of service. These excess charges would be as follows:

Van Ben Schoten.....	\$31.16
Loshen	51.02
Shaugnessy	30.20
Rouse	30.20
Peterson	119.18

These amounts would have to be paid by the prospective customers for service lines across their respective properties.

The above cost for constructing lines does not include additional amounts required for the street lighting services. To furnish these services there would be an additional investment amounting to \$588.59. The total cost for furnishing the street lighting service, including fixed charges, would be \$147.17, against which the estimated revenue from street lighting is \$76.00.

The total cost for installing lines would be as follows:

Commercial circuit	\$1,466.79
Street lighting circuit	588.59
Total	<u>\$2,055.38</u>

The total operation charges would be as follows:

Commercial circuit	\$489.30
Street lighting circuit	147.17
Total	<u>\$636.47</u>

The gross revenue is estimated as follows:

Eight customers at an average of \$24 each per annum	\$192.00
Four street lights for the Borough of Ramsey on a contract for five years at \$19 each.....	76.00
Total gross revenue.....	<u>\$268.00</u>

Without special guarantee the company's guaranteed revenue would be the minimum charge of \$1.00 per month from each customer, and the revenue from the street lighting.

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The construction work referred to above would require the following changes:

First. Changing the present system of secondary circuits on Lake Avenue and Lower Saddle River Road, Ramsey, N. J., to a primary circuit for a distance of 1,349 feet.

Second. The erection of primary and secondary circuits, etc., utilizing twenty-six poles of the telephone company now set on Hillside Avenue, south from Lake Avenue, and the further erection of nine new poles on the same avenue and the replacement of one pole. These poles, however, are on the east side of the avenue, which is in the Borough of Saddle River and the Township of Orvil, for a distance of 4,130 feet, ending at a point opposite the residence of Mr. Crick, in the Borough of Ramsey.

Third. The erection of a street light circuit on Hillside Avenue, Ramsey, utilizing the poles and cross-arms erected for commercial circuits and furnishing energy for four 32 C. P. street lights, the last lamp to be erected in front of the residence of Mr. Crick, a distance of 4,130 feet from the present existing street light circuit on Lake Avenue. If the above construction is carried out as described, on the existing pole line, the Borough of Ramsey would be paying for street lights located outside of the borough and in the Borough of Saddle River and Township of Orvil.

Fourth. The erection of commercial and street lighting circuits for the balance of the distance, 1,555 feet from a point in front of the residence of Mr. Crick, further south on East Crescent Avenue, Allendale, is not considered in the above estimate.

The above estimates indicate that the cost of furnishing service under the present conditions is very considerably in excess of the revenue to be obtained from the prospective customers. Under all the circumstances, the Board would not be justified in requiring the company to make the extension prayed for.

It would appear that the most advantageous proposition, so far as service to Mr. Crick personally is concerned, would be the construction of the line from the south. This would involve an assurance on the part of Mr. Crick that the annual revenue would amount to at least \$45.00, and such assurance should be extended over a period of at least five years.

Syman Hirsch vs. Plainfield-Union Water Co.

It is RECOMMENDED that the company make the extension from the south if Mr. Crick will assure, for a period of at least five years, an annual revenue of \$45.00. If Mr. Crick desires to accept this recommendation and the company is not willing to do so the Board stands ready to issue an order requiring the construction in this way upon receiving evidence that an application has been made to the company, accompanied by satisfactory guarantees in regard to the revenue.

Dated March 27th, 1917.

No. 418.

SYMAN HIRSCH

VS.

PLAINFIELD-UNION WATER CO.

1. Complaint is made of an alleged excessive charge by a water utility. It appears that the complainant tendered payment of subsequently accrued bills which the utility refused to accept.

2. The Board holds that in view of the circumstances in this case, which apparently involves a dispute of the merits of a charge for service for a single quarter, the utility should not discontinue services to the premises of the petitioner and that it should accept payment of the subsequently assessed charges, and the dispute with the complainant should be settled in a court of law.

William Newcorn, for the complainant.

W. J. Whelan, for the company.

The complainant alleges that his bills for water service in Plainfield are excessive and the amount of water for which he is charged was not used.

Syman Hirsch vs. Plainfield-Union Water Co.

He owns the premises known as No. 206 East Fourth Street. This is a two-family dwelling house with one bath, two sinks and two closets, for which he formerly paid for water service a flat rate of \$26.00 per annum, payable semi-annually. On June 15, 1916, a meter was installed on the premises and about October 1, 1916, he received a water bill stating that the meter registered on September 23, 1916, 53,500 cu. ft. for which he was charged \$67.71. The water company states that on discovery of this large consumption at these premises the meter was re-read by two clerks and the meter reading verified, further that a leak was found in the closet, but none of these witnesses were produced.

The complainant owns also the premises at No. 534 West Fourth Street, which are occupied by twelve families, but the only water service consists of one hydrant in the yard for use, in common, and one closet. These premises have had metered service for several years and for the quarter from June 6, 1916, to September 7, 1916, the water charges were \$51.63. The highest quarterly bill during the years 1915 and 1916 was \$26.43.

Mr. Hirsch also owns premises known as No. 243 East Third Street, which consist of a store and three flats, occupied by tenants. In this building there are two baths, three closets, three sinks and one washtub. The bill for metered service from June 6, 1916, to September 5, 1916, for these premises was \$24.40. The bills for the three preceding quarters were \$9.85, \$11.35 and \$13.00, respectively. The disputed water bills are such material increases over previous bills for like periods that the complainant insists he is overcharged. He made an investigation and says he found only small leaks in the service of two of the properties referred to. He employed a plumber to make the necessary repairs and produced him as a witness at the hearing, but the work was actually done by the plumber's workmen and he could not testify to actual conditions existing at any of the premises or to any other facts except the amount of his bill for repairs.

The company in its answer claims the meter at No. 534 West Fourth Street showed the consumption of 39,200 cu. ft. on September 7, 1916, amounting to \$51.63, and that it caused this reading to be verified on September 12th, that on the day last mentioned there was a large leak in the lead pipe under the closet;

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that it again re-read the meter on October 11, 1916, which showed that only 3,200 cu. ft. of water had been consumed in one month and three days. The persons who are alleged to have read the meters and to have discovered these defects in the plumbing were not produced at the hearing.

On December 16, 1916, more than two months after the dispute arose, Mr. E. B. Annett, an inspector of this Board, made an inspection of the water meter measuring service on each of the premises previously mentioned. At 206 East Fourth Street the meter proved 0.8% fast; at 234 East Third Street the meter read 1.8% fast; at 534 West Fourth Street the meter proved 0.8% fast, so that at the time of the inspection the meters were working within a percentage allowed by this Board, but one of Hirsch's tenants, who was called as a witness, says that several employees of the water company repeatedly visited the West Fourth Street premises in the months of September and October and did something to the water meter. The secretary of the company admits his men were sent there but that they only made meter readings and observations. Such disputed facts can only properly be settled in a court at law. This Board is without power to order reparation (*Flemer vs. West Orange Water Co.*, 3 P. U. R., p. 428).

Where there seems to be an honest dispute between the utility and the customer as to the amount owing and the customer is financially responsible, we believe the decision in *re Albert L. Hatch vs. Consumers Company, Ltd.*, 17 Idaho Reports, p. 207, the proper rule. The court said:

"A regulation that in case a consumer is in default his supply will be cut off is reasonable and may be enforced. But such a regulation cannot be made the instrument by which the water company can become the judge in its own case, or shut off water to enforce payment of a disputed bill; nor by its means can payment be enforced which is not the duty of the customer to make."

The complainant tendered payment of the subsequently accrued water bills but the company declined to accept same.

The Board is of the opinion that the company, in view of the circumstances in this case, which apparently involves a dispute of the merits of a charge for service for a single quarter, should not

Clayton-Glassboro Water Company—Approval of Rates.

discontinue service to the premises of the petitioner and that it should accept payment of the subsequently assessed water charges. It is further of the opinion that its dispute with the complainant should be settled in a court of law.

Dated April 2d, 1917.

No. 419.

IN THE MATTER OF THE APPLICATION OF THE CLAYTON-GLASSBORO WATER COMPANY FOR APPROVAL OF NEW SCHEDULE OF RATES.

A fair return upon investment is predicated upon adequate and proper service. The duty to supply service is an absolute, not a relative one. The duty imposed by law is to furnish safe, adequate and proper service, and it is for such service only that the company is entitled to fair and reasonable rates yielding fair returns to the owners of the property upon their investment therein.

J. Fithian Tatem, for the company.

S. Huntley Beckett, for Glassboro.

Francis B. Davis, for Clayton.

Application was made by Clayton-Glassboro Water Company for permission to put into effect new schedules carrying increased rates.

Testimony and briefs were submitted, and the matter was taken into conference for determination. Within a few days after the matter went to conference, complaints were received from consumers that the service rendered by the company was "grossly inadequate." These complaints were investigated by the Board's engineers and it developed that the wells, driven in 1915, after complaint of lack of service, had become clogged and were not

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yielding sufficient water. The Board's engineers kept the matter under supervision and it was hoped that the condition found would be corrected. Throughout the summer, however, repeated complaint was made that no water was available for street and lawn sprinkling and that pressures were low. More recently two fires occurred in Glassboro and, upon investigation, the Board's engineers found that little, if any water was in the tank at Glassboro and that pressures were not adequate. Thereupon, the Board held a hearing, at which the company's representative related the difficulty experienced by the company in securing sufficient water from its wells, and described the practice with respect to pumping and the reasons for the failure to maintain a large head of water in the Glassboro tank. The Board, therefore, filed a report stating its conclusions with respect to advisable changes in the method of operation. The company has informed the Board that it will make these changes. Whether the wells will yield sufficient water for all reasonable uses, and the changes of operation referred to will result in adequate pressures cannot be determined until the warm weather requirements have been met. During the last summer, complaints of insufficient supply and inadequate pressures appeared to be warranted.

A fair return upon investment is predicated upon adequate and proper service. The duty to supply service is an absolute, not a relative one. The duty imposed by law is to furnish safe, adequate and proper service, and it is for such service only that the company is entitled to fair and reasonable rates yielding fair returns to the owners of the property upon their investment therein.

For these reasons the Board held the application for increased rates. It now becomes apparent that some months must elapse before it can be known whether adequate and proper service will be afforded. It seems better, therefore, to make some present disposition of the matter.

The application for an increase of rates will be denied, with leave, however, to renew later if the company desires. The record heretofore made will be held and may be used upon rehearing, if it seems desirable to do so.

Dated April 2d, 1917.

C. Craig Tallman et al. vs. The Del. & Atl. Tel. and Tel. Co.

No. 420.

C. CRAIG TALLMAN ET AL.

VS.

**THE DELAWARE & ATLANTIC TELEGRAPH AND TELEPHONE
COMPANY.**

The establishment of a hard and fast line as the division between telephone service zones is unnecessary and unwarranted. The exigencies of service may require a certain limited amount of overlapping in order that the service furnished may be of the greatest value.

James Mercer Davis & Charles Atkinson, for the complainant.

R. V. Marye, for the company.

The petition of C. Craig Tallman sets forth that he and two neighbors, Clayton Hancock and Harry Fort, are desirous of obtaining telephone service, that they were formerly subscribers of the Interstate Telegraph and Telephone Company and received services through the Mt. Holly exchange of that company, that on account of the discontinuance of the service of the Interstate Telegraph and Telephone Company, they desire service from the Bell system and applied to the Delaware & Atlantic Telegraph and Telephone Company for service from the Mt. Holly exchange of that company. It is stated that the applicants have been refused service from the Delaware & Atlantic Telegraph and Telephone Company with a statement that their residences are located in the territory supplied by the Farmers Telephone Company from the Bordentown exchange. The petition states that the applicants desire service from the Delaware & Atlantic Telegraph and Telephone Company, and not from the Farmers Telephone Company.

The answer filed by the Delaware & Atlantic Telegraph and Telephone Company states that that company does not operate

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in the territory where the residences of the petitioners are located, but that that territory is served by a licensee company (the Farmers Telephone Company) and that it would be an unwarranted invasion of the Farmers Telephone Company's territory and an unnecessary and unjustifiable duplication of telephone plant if the Delaware & Atlantic Telegraph and Telephone Company should extend its lines to serve the petitioners.

The complaint alleges further that Mr. Tallman's residence is 4,900 feet from the line of the Delaware & Atlantic Telegraph and Telephone Company, Mr. Fort's, 1,200 feet, and Mr. Hancock's, 2,900 feet from the lines of that company. The boundaries set out arbitrarily by the telephone companies in their agreement as to the territory within which each will operate, are shown in maps already filed with the Board and a copy of the section particularly referred to was submitted as Exhibit P-1. This shows that the complainants are located just within the boundary of the territory allotted to the Farmers Telephone Company. The three complainants are located not far from the intersection of the road leading south from Columbus with the road leading from Jacksonville to Jobstown. The intersection is $4\frac{1}{2}$ miles, air line, distant from the centre of Mt. Holly, and $7\frac{1}{2}$ miles distant from the centre of Bordentown. In the map submitted as Exhibit P-1, the boundary line between the territory of the Farmers Telephone Company and the Delaware & Atlantic Telegraph and Telephone Company follows the line of Crafts creek from the Delaware river southward to a line forming part of a circle, having Columbus as a centre, and with a two-mile radius. This circle intersects another circle with a two-mile radius having Jobstown as a centre. The intersection of the two circles is shown on the map at a point just west of the residence of Mr. C. Craig Tallman and northwest of the intersection of the roads referred to before.

In the maps submitted by the Farmers Telephone Company in connection with its appraisal of 1912, the boundary line is shown as a straight line from the mouth of Crafts creek directly towards the center of Pemberton, and in the 1912 maps the residences of the three complainants are located in the territory served by the Delaware & Atlantic Telegraph and Telephone Company.

From the testimony of Mr. Tallman, it appears that his prop-

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erty is located on the west side of the stone road to Columbus and, on the south side, borders the Jobstown-Jacksonville road. The next property to the west of Mr. Tallman is owned by Mr. Dance who now has telephone service from the Delaware & Atlantic Company, the line coming from the direction of Jacksonville. Mr. Tallman testified that the distance from the Dance residence eastward along the Jobstown-Jacksonville road to the residence of Mr. Fort is 1,200 feet. From Mr. Dance's residence to Mr. Hancock's residence the distance is 2,900 feet, and the total distance from Mr. Dance's residence measured along the Jobstown-Jacksonville road and thence along the Columbus road to the Tallman residence is 4,900 feet. It further appears from Mr. Tallman's testimony that the poles formerly belonging to the Interstate Telegraph and Telephone Company, which were used in supplying the three complainants, are, with the exception of one or two poles, still in place and that service could be supplied to the three complainants by an extension of wire lines over the poles now in place.

Testimony was submitted by the company to the effect that Columbus is considered as a theoretical area, but a part of the Bordentown physical exchange area. Testimony further showed that while the three complainants have business with the supply stores in Columbus and handle their milk through the Columbus freight station, their main business and banking connections are in Mt. Holly. Mt. Holly is the county seat and the largest town near the complainants and the testimony is conclusive that the value of the service to these particular complainants is much greater if served from Mt. Holly than from Bordentown. This would be equally true if the actual physical exchange of the Farmers Company was located at Columbus, although Columbus is only about $2\frac{1}{4}$ miles away, while Mt. Holly is $4\frac{1}{2}$ miles away.

There must, of course, be some division between the areas supplied from different exchanges, and this is correct whether the exchanges belong to the same company or to different companies. Such divisions, however, cannot be arbitrarily made unless there are natural boundaries which definitely separate the communities. In making these divisions proper consideration must be given to the relative value of the service as affected by divisions of the

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territory. The Interstate Telephone and Telegraph Company formerly served, to some extent, all of the territory involved in this complaint and in that company's opinion the complainants were properly served when connected to the exchange in Mt. Holly. This tends to support the contention of the complainant.

In the brief of the respondent much stress is laid upon the decisions of this and other commissions to the effect that competition is unjustifiable and really results in increases in cost. The company's witness, Mr. Replier, admitted that the cost of the service as furnished from Mt. Holly would be less than if furnished from Bordentown. Under all the circumstances the Board is of the opinion that the establishment of a hard and fast line as the division between telephone service zones is unnecessary and unwarranted. The exigencies of service may require a certain limited amount of overlapping in order that the service furnished may be of the greatest value. The fact that there may be customers to the southward of Mr. Tallman who are connected to the Bordentown exchange does not affect this conclusion. It is the opinion of the Board, and the Board FINDS AND DETERMINES, that in refusing to supply service to C. Craig Tallman, Clayton Hancock and Harry Fort through its Mt. Holly exchange the Delaware & Atlantic Telegraph and Telephone Company does not furnish adequate and proper service. An order requiring the said company to supply service to the complainants will be entered.

Dated April 2d, 1917.

ORDER.

This case being at issue, upon complaint and answer on file, and having been duly heard and submitted by the parties, and full investigation of the matters and things involved having been had, and the Board having, on the date hereof, made and filed a report containing its findings of fact and conclusions thereon, which said report is hereby referred to and made a part hereof, the Board of Public Utility Commissioners,

HEREBY ORDERS The Delaware & Atlantic Telegraph and Telephone Company to supply, on application, service to C. Craig

Farmers Telephone Company—Increased Rates.

Tallman, Clayton Hancock and Harry Fort from its Mt. Holly exchange, upon the same terms and under the same conditions that other subscribers to its service from said exchange are supplied.

This order shall become effective May 1st, 1917.

Dated April 2d, 1917.

No. 421.

IN THE MATTER OF INCREASED RATES PROPOSED BY THE
FARMERS TELEPHONE COMPANY.

1. The fact that a telephone company, while maintaining for a number of years a six per cent. dividend rate, was able to meet, out of surplus and earnings the heavy expenditure required because of a storm doing unprecedented damage and has since maintained its dividend at six per cent. indicates that material increases in rates would not be warranted to provide against the somewhat remote contingency of a storm of similar severity.

2. It is urged in support of increased charges that trunk lines are used for prolonged conversation about unimportant matters. The Board holds it to be unnecessary to increase rates to all subscribers to prevent abuse by some of the service. If an undue use of trunk lines is permitted by parties conversing for a long time, resulting in the exclusion of other parties desiring to use the line, it would appear that this might be properly dealt with by the enforcement of a rule which would compel disconnection when the use of a line is being unduly prolonged, and refusal to connect the parties until others desiring to use the line have been afforded reasonable opportunity to do so.

Theodore J. Grayson, for the company.

John Meirs and Isaac Edward Harrison, for the objectors.

ORDER.

On January sixteenth, nineteen hundred and seventeen, the Board entered an order suspending an increase, change or altera-

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tion proposed by the Farmers Telephone Company in its rates charged to subscribers to its service. The Board, by its order, fixed the thirtieth day of January for hearing on the question whether the increase, change or alteration proposed is just and reasonable. Said hearing having been held the Board is of the opinion and finds that the Farmers Telephone Company has not sustained the burden of proof to show that the increase, change or alteration proposed is just and reasonable. The Board is not satisfied that the same is just and reasonable, and withholds its approval of the same.

The Board **HEREBY ORDERS AND DIRECTS** the Farmers Telephone Company to maintain the same rates and areas of service as were in effect on the sixteenth day of January, nineteen hundred and seventeen.

Dated April 16th, 1917.

REPORT.

On April 16th, 1917, the Board filed an order directing the Farmers Telephone Company to maintain the same rates and areas of service as those in effect on the 16th day of January, 1917. This order was filed following a hearing upon certain increases in rates proposed by the company. The increases so proposed were suspended by the Board's order of January 16th, 1917. The period during which, under the statute, the Board was required to rule on the question of approval of the proposed increases expired April 16th. The conclusion of the Board that the increases should not be allowed was reached after a review of the record and consideration of the testimony and arguments advanced, but these conclusions were not embodied in a written report at the time the order was filed. The parties to the proceeding, both the telephone company and those opposed to the increases, are entitled to an explanation of the reasons which governed the action of the Board in denying the application and these reasons are set forth herein.

Farmers Telephone Company—Increased Rates.

NATURE OF PROPOSED INCREASE.

The company has not proposed any increase in its base rates. What is proposed is that different districts shall be observed, in the territory in which the company operates; that in each of said districts the present base rates shall apply, so long as the use of the service is within the limits of the district. When connection is made with a telephone in another district, service which is now afforded free would be subject to charge and where charges are now made the same would be increased. The following shows the changes proposed:

	At Present.	As Proposed.
Pemberton to Chatsworth	Free	5c.
New Egypt to Allentown	Free	5c.
New Egypt to Bordentown	5c.	10c.
Pemberton to Columbus	Free	5c.
Pemberton to Chesterfield	Free	5c.
Pemberton to Bordentown	5c.	10c.
Pemberton to Clarksburg	10c.	15c.
Chatsworth to Clarksburg	10c.	20c.

Pay station rates 5 cents flat increase.

The general manager and secretary of the company estimated that the proposed increases in rates would result in increased revenue of from two thousand to thirty-five hundred dollars per year.

THE COMPANY'S EARNINGS.

Statements of the company's earnings and expenses for the past three years were submitted in evidence and may be summarized as follows:

For the year ending December 31, 1914.

Total revenues	\$28,774 77	
Total expenses	27,230 00	
Gross income	\$1,544 77	
Deductions from gross income including accrued interest, miscellaneous charges and dividends	\$5,717 74	
Net loss for the year		\$4,172 97

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The accounts for the year 1914 were not kept in accordance with the standard classification later adopted. There were charged to expenses for that year \$16,116.85 for repairs, maintenance and reconstruction. This extraordinary charge which resulted in a net loss to the company was due to the heavy storm of that year, which destroyed part of the company's line.

For the year ending December 31, 1915:

Total revenues	\$29,061 53
Total expenses (including taxes)	18,483 45
Gross income	\$11,178 08
Deductions from gross income including accrued interest, miscellaneous charges and dividends	\$6,019 26
Balance transferred to surplus	\$5,158 82

In the expenses for the year were included \$7,774.58 for repairs, depreciation and maintenance, and \$3,600 was charged to depreciation of plant and equipment.

For the year ending December 31, 1916.

Total revenues	\$31,808 25
Total expenses, including taxes	24,477 69
Gross income	\$7,330 56
Deductions from gross income including accrued interest, miscellaneous charges and dividends	\$6,043 56
Balance transferred to surplus	\$1,287 00

In the expenses for the year were included \$11,436.05 for repairs, depreciation and maintenance. \$6,000.00 was charged to depreciation of plant and equipment.

Testimony showed that practically from the time of the beginning of this company it has paid six per cent. on its capital stock. The company has no bonded indebtedness. Its total capitalization, represented by issues of stock, is \$97,500.00. While an inventory and appraisal submitted by the company purports to show the value of the company's property it does not insist this should be the base upon which a return should be allowed. Mr.

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Hargrove, secretary and general manager of the company, testified "We don't ask for dividends on any more than the actual stock issued."

It is claimed that the existing rates are not sufficient to allow proper expenditures for depreciation and maintenance, to provide for contingencies and give assurance of the payment of such dividends. It is claimed in support of the contention that the additions to surplus account are insufficient; that the storm of three years ago required an expenditure of \$12,000 to repair the damage done; that should another storm requiring a like expenditure occur, the company would not have sufficient funds accumulated, out of its present earnings, to meet the loss. It does not appear, however, that during all the period of the company's existence any storm doing damage comparable with that of 1914 occurred. It further appears that for four years the company operated without a serious storm; that which caused the heavy expenditure for repairs was referred to by the witness as an "ultra serious" storm. A storm of this kind may not occur once in a generation. The fact that the company, while maintaining its six per cent. dividend rate for a number of years preceding this, was able to meet, out of surplus and earnings, the heavy expenditure required because of a storm doing unprecedented damage and has since maintained its dividend at six per cent., indicates that material increases in rates would not be warranted to provide against the somewhat remote contingency of the occurrence of a storm of similar severity. It seems to the Board also that earnings for the year 1916, in which the balance transferred to surplus was \$1,287 can hardly be taken as a fair sample of what might be expected from the company's operations. The year ending December 31, 1915, would more closely approximate a normal year. The balance transferred to surplus for this year was \$5,158.82. It is true that the allowance for depreciation reserve in 1915 was \$3,600 as compared with \$6,000 allowed in 1916, but making an allowance of \$6,000 for 1915 and also an allowance for an increase in taxes there would have been added to surplus for the year 1915 the sum of \$2,496.49, after making liberal appropriations for maintenance and replacements and

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depreciation reserve. These have approximated 10% of physical value.

The Board is not satisfied from the record before it that a greater sum than \$6,000 should be appropriated annually to depreciation reserve after making proper allowances for replacements and maintenance of plant and equipment. Nor does it seem to the Board that because of the high cost of labor and materials now existing the company should be permitted to make such a radical change in its schedules. The continuance of such high costs is by no means certain. The company, during the year 1916, notwithstanding the high costs then prevailing, closed the year with an addition to its surplus account, and the record certainly indicates that during years when normal conditions prevail the company should have no difficulty under its present schedule in meeting all expenses, maintaining its plant and equipment in good condition, make proper appropriations for depreciation reserve, pay six per cent. return on its capital stock, and set something aside for surplus.

It is urged in support of the toll charges, proposed for service now afforded without extra charge, that the trunk lines are used for prolonged conversation about unimportant matters, and that the convenience of those desiring to make a more reasonable use of the lines is interfered with and the company's ability to provide adequate service over its trunks is restricted. This argument for the increase implies that it is required not for the purpose of obtaining needed revenue but to restrict the use of the company's lines. It seems to us to be unnecessary to increase rates to all subscribers to prevent abuse, by some, of the service. If an undue use of the trunk lines is permitted by parties conversing for a long time, resulting in the exclusion of other parties desiring to use the line, it would appear that this might be properly dealt with by the enforcement of a rule which would compel disconnection when the use of a line is being unduly prolonged, and refusal to connect the parties until others, desiring to use the line, have been afforded reasonable opportunities to do so.

The Board is in sympathy with the expressed desire of the company to provide, from its earnings, an adequate fund to take

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care of depreciation and a reasonable surplus to meet contingencies. As heretofore stated the record is not such as to persuade the Board that the sum now charged off for depreciation is inadequate. If it is inadequate and an increased charge is necessary in order that an adequate fund may be provided, the amount required should be more definitely ascertained and the Board better advised as to what additional revenue should be obtained to provide for this. In view of the long period of years during which this company has maintained its property in good state, paid regularly its six per cent. dividend to its shareholders, the fact that it paid this dividend last year, under abnormally expensive conditions of operation, and that it is by no means assured that the abnormal prices, now existing, adding to the cost of operation, will be long continued, it seems to the Board not unreasonable for the company to continue, at least for the present, under its existing schedule of rates.

Taking into consideration all the facts and circumstances as developed in this case the Board is of the opinion that the proofs do not establish that the proposed increases are just and reasonable, and the application must, therefore, be denied.

Dated April 28th, 1917.

No. 422.

MANUFACTURERS AND PROPERTY INTERESTS ASSOCIATION ET AL.

VS.

PENNSYLVANIA RAILROAD COMPANY ET AL.

After the most careful consideration of all matters submitted at the first hearing and on the rehearing of this petition and weighing all the conditions involved in this proceeding, nothing has been produced in the evidence that would lead to a change in the conclusions announced in the original report. Petition is dismissed.

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Frederick C. Henn, for Manufacturers and Property Interests Association.

John Bentley and Thomas J. Brogan, for the City of Jersey City.

A. C. Wall, for Pennsylvania Railroad Company.

The petition of the Manufacturers and Property Interests Association and others was amended by the filing of a new petition on April 12th, 1915, which alleges that the Pennsylvania Railroad owns or controls the operation of the electric trains running from Exchange Place, Erie station, Grove Street station, Summit Avenue station in Jersey City, and the station in Hoboken, to Park Place, Newark, and prays that an order be made requiring the Pennsylvania Railroad Company to abolish the Marion station and to construct a station at West Side Avenue, which can be used by the electric trains running from Newark, from Hoboken, and from Erie Station, Exchange Place, Grove Street and Summit Avenue stations in Jersey City.

The mayor and aldermen of Jersey City also filed an additional petition amending their former petition, alleging that the Hudson & Manhattan Railroad Company operates trains on the electric railway from Hoboken and Exchange Place, Jersey City, to a point in the middle of the Summit Avenue station in Jersey City, and that the Pennsylvania Railroad Company operates said trains west of said point, and praying that an order be made directing both companies to erect and operate at West Side Avenue, or at such other nearby point as may seem best, a station, and provide cars for such passengers as may desire to use such station, and to stop a sufficient number of trains operating on said railroad for the use of such passengers.

On February 26th, 1915, the mayor and aldermen of Jersey City filed a petition containing the same allegations as those set forth in the petition of the Manufacturers and Property Interests Association.

On April 9th, 1915, the Pennsylvania Railroad Company filed an additional answer admitting that it operates steam trains

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running from Exchange Place to Newark and places beyond, and says that some of these trains, about fifteen each way daily, stop at Marion; that it is the lessee of the right of way from the west portal of the Hudson & Manhattan tunnel near Prior Street, Jersey City, to Park Place, Newark, the owner of which right of way is the United New Jersey Railroad and Canal Company. It alleges that the operation of the electric trains over the Hudson & Manhattan Railroad from Cortlandt Street to Summit Avenue and from Summit Avenue west to Park Place, Newark, is carried on under an agreement between it and said Hudson & Manhattan Railroad Company and other companies and an agreement supplemental thereto, both of which are in evidence. It denies that the service at Marion is poor and inadequate or that the inhabitants of the western section of Jersey City are without proper railroad transportation.

It further answers that between Newark and Summit Avenue, Jersey City, the electric railway is a rapid transit line and that if a station were installed at West Side Avenue, necessitating a delay in train operation of two minutes on a journey between Newark and Summit Avenue, now consuming twelve minutes, fifteen per cent. of the efficiency of the express service between those points would be destroyed and the large body of the public employing this convenience made to suffer for the convenience of a few in the immediate locality of West Side Avenue; that the Hudson & Manhattan line is an urban line from New York City to Summit Avenue station; that the electric line west of Summit Avenue is an interurban line; that the Marion station is 862 feet distant from West Side Avenue and serves a body of the public desiring to travel between that point and points on the main line of the Pennsylvania Railroad and that station is in no way connected with the electric service between Park Place and Summit Avenue; that it is not feasible to establish a station at West Side Avenue for the use of the type of train operated on the electric line and in the tunnels under the Hudson in conjunction with the standard steam trains employed on the main line of the Pennsylvania Railroad because of a difference in width between the tunnel cars and the steam railroad cars amounting to about a foot or more; that the community at West Side

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Avenue is adequately served by the Summit Avenue station, 2,710 feet distant from the proposed West Side Avenue station; that the present ticket collecting system would be destroyed; that the establishment of a station at West Side Avenue would permanently reduce the train capacity of the rapid transit line and so depreciate the value of the entire investment; that the installation of such a station would cost a sum varying from one hundred to three hundred thousand dollars, depending upon the method employed in the construction of the station and the conditions of surrounding property, the elimination of grade crossings and substitution of a tunnel or of an under-grade crossing at the nearest available location west; that the establishment of a station at West Side Avenue would violate the consideration which induced the Pennsylvania Railroad and the other companies to enter into the agreement with the Hudson & Manhattan Railroad Company if as an accompaniment to the establishment of such a station the five-cent fare provision were extended westerly to West Side Avenue.

A great many witnesses were called which resulted in the taking of voluminous testimony, and after careful consideration the Board was of the opinion that upon the record before it the petitions must be denied for the following reasons:

1. It does not appear to the Board that train service, identical with that provided at Summit Avenue, can be reasonably required under present conditions at a station located at West Side Avenue.

2. It does not appear that it would be reasonable to require the transportation of passengers from a station at West Side Avenue to the stations of the Hudson & Manhattan Railroad Company, at the rate of fare now charged for the transportation of passengers from Summit Avenue to such stations. With differences existing as to service and rates of fare between stations at Summit Avenue and West Side Avenue, such differences being to the disadvantage of West Side Avenue, and both stations being accessible to residents of the Marion section, it is our opinion that the patronage of the station at West Side Avenue would fall far short of the expectations of the petitioners.

3. The additional expenditure necessary to make the changes

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in track and signal system, and for the construction of the new station which would be needed to meet the desires of the petitioners, could not be reasonably required, in view of what under the conditions would be the probable use of the station.

4. It does not appear to the satisfaction of the Board that the number of passengers who would use a station at West Side Avenue, if the same is established, would be sufficiently large to justify the Board at this time in issuing an order which would interfere with the high speed service now maintained between Harrison, Manhattan Transfer and Summit Avenue.

Great stress was laid by the Pennsylvania Railroad Company upon its claim that fast express service must be maintained between Newark and from other points on its main line to downtown New York, even at the sacrifice of all other service. This was not altogether in accord with the judgment of the Board and we defined our position by saying,

"Notwithstanding all that may be said in favor of the express service, the Board is unwilling to approve a proposition that a railroad company may plan a route especially for such service, make no provision for local service along the route, and expect that it will remain for all time a through route. It may be that for a period the advantages of express service would reasonably predominate. But as the territory along the line develops and grows, the demand for additional stops will become more and more insistent, and where it is shown that such demands are based upon grounds which would reasonably justify the requirement of local stops, such stops must and should be made. It is not unreasonable to anticipate that the time may come, perhaps in the not distant future, when, if the road between Manhattan Transfer and Summit Avenue remains as it is now, it will be necessary in order to meet the reasonable demands for proper and adequate local service, to make the express service subordinate to the local service. This would result in the line becoming a purely local line. It would seem, therefore, in order that the express service may be maintained and the demands for local service met with proper facilities, the railroad company may well give consideration to the problem of devising, to meet the growth and development along this line, some plan whereby both express and local service may be safely and adequately provided."

In November, 1915, the petitioner filed a petition for rehearing.

On January 19th, 1916, the Board made an order granting the rehearing for the purpose of giving the petitioners opportunity to supplement the proofs theretofore submitted.

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Dates were arranged for hearing to suit the convenience of Jersey City, and the hearings were in progress June, 1916, but before they were concluded the National Guard, of which Mr. John Bentley, corporation attorney for Jersey City, was an officer, was called to the Texas border. Mr. Bentley had been representing the city in the proceedings before the Board and the city objected to a continuance of the hearing in Mr. Bentley's absence and asked that further hearing be postponed. The request was complied with, and the taking of testimony was not resumed until September 21st, 1916.

On October 11th, 1916, the hearings were concluded and the matter was placed on the Board's conference list, with the understanding that briefs should be filed.

On January 5th, 1917, the attorney for the city sent to the president of the Board a copy of his brief, with a letter which stated, "the long delay has been due to an attempt to agree with the railroad as to the number of people in the territory contributory to the proposed station."

It has been represented to the Board, on behalf of the City of Jersey City, that it is of great importance to those residing or doing business in the neighborhood of the proposed new station that the same should be built. On the other hand it has been represented that the electric line from Manhattan Transfer to Jersey City and New York is part of the express service of the Pennsylvania Railroad Company to down-town New York; that there are now three stops in Jersey City on this line; that the establishment of the additional stop at West Side Avenue would be followed by petitions for other stops and that in a short time there would no longer be express service from Manhattan Transfer to down-town New York.

A large number of protests against granting the petitioner's prayer have been filed with the Board. Among those objecting are the mayor and Chamber of Commerce of Trenton, the Boards of Trade of Elizabeth, Rahway and New Brunswick, the Chambers of Commerce of Asbury Park and Long Branch, the chairman of the Legislative Committee of the Order of United Commercial Travelers of America, and a number of individuals residing and doing business along the line of the Pennsylvania

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Railroad in New Jersey, who are interested in express service to and from down-town New York. No testimony or arguments were submitted by these parties. Their protests standing alone can, of course, have no probative force.

It was agreed that all depositions previously taken as well as all exhibits previously offered in the cause should remain as part of the case. Many of the witnesses who had been sworn previously were recalled and necessarily much of the testimony was a repetition of what had been formerly given.

The Board having pointed out its reasons for denying the application, the petitioners' efforts on the rehearing were to overcome the stated objections by additional testimony.

AREA AND POPULATION OF THE DISTRICT WHICH WOULD BE TRIBUTARY TO A STATION AT WEST SIDE AVENUE.

The limits of the Marion section which would be benefited by a station at West Side Avenue according to the view of petitioners include a territory bounded on the west by the Hackensack river; on the south by Duncan Avenue; on the east by a line running from Fairmount Terrace to the Boulevard, and a line drawn through Fairmount Terrace through Walden Avenue to Stuyvesant Avenue; thence through the middle of the block bounded by Van Wagenan and Romaine Avenues to Sip Avenue; thence east of Sip Avenue to Romaine Avenue to the middle of the block between Sip and Pavonia Avenues; thence east through the middle of the block bounded by Romaine and Garrison Avenues to Garrison Avenue; thence north along Garrison Avenue to Tonnelle Avenue; thence along Tonnelle Avenue to the Morris & Essex Division of the D., L. & W. Railroad.

This was the area given by traffic expert Lane called by the petitioners at the first hearing, and he estimated the population as 11,200, and that approximately 16%, or 1,791 of them, who now use the Summit Avenue station daily, would use the West Side Avenue station. In addition, probably 500 employees of factories would use it. In considering this problem, we must not forget that traffic diverted from the Summit Avenue station would not be new business for the railroad.

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Counsel for the company, after analyzing the testimony and exhibits, shows that the probable business at the proposed station would be 1,209 persons daily; 722 of these being present patrons of the Summit Avenue station.

On the rehearing the petitioners greatly extended the area upon which they claimed the traffic pull of a station at West Side Avenue would be exerted. This new area extended north of the proposed station as far as Morris & Essex tracks; east as far as Tonnelle Avenue; west to the Hackensack river. On the south of the Pennsylvania tracks east to the Hudson Boulevard and south to the Newark & New York Railroad. This area has an estimated population of 20,000, but, after being repeatedly traveled by us, we conclude that the claim as to the extent of the area to be served is unwarranted.

Weighing all the testimony on this point, and bearing in mind the topography of this section of the city, the irregular and unsystematic street plan and development, the location of existing trolleys, and the station of the Newark & Long Branch Railroad already on the West Side (all of which were personally inspected and traveled by us), we conclude that the utmost possible area which would be served by the said station would be bounded as follows: On the west by the Hackensack river; on the south by Montgomery Street (more probably Highland Avenue) and the Catholic cemetery; on the east by a line running midway between the Boulevard and West Side Avenue through Weldon Street to Stuyvesant Avenue; thence through the middle of the block bounded by Van Wagenan Avenue and Romaine Avenue to Sip Avenue; thence east up Sip Avenue to Romaine Avenue, continuing north through Romaine Avenue to Broadway; thence east along Broadway to Tonnelle Avenue; thence along Tonnelle Avenue to the Morris & Essex Division of the D. L. & W. Railroad. For many persons in this area Summit Avenue is as convenient as West Side Avenue.

The territory excluded by us from Mr. Lane's map and survey includes 521 buildings, which consist of apartments, dwellings, public buildings and manufacturing establishments, and approximately decreases the census made by Mr. Lane by some thousands. Many of the persons living in the area to be served are locally

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employed and are not in the commuter class. Our description and estimates are made from the map of the Marion section made by F. Van Z. Lane, and filed as an exhibit.

In our judgment, it is not probable that the total number who would use the station daily from all parts of the territory, including the traffic diverted from Summit Avenue, would exceed 1,500, if the same service and rate of fare prevailed at both stations, notwithstanding the opinion of Mr. Gray and Mr. Brackenridge that a much larger patronage might be expected.

The claim of the petitioners as to the area to be served by the proposed West Side Avenue station is not justified by the facts submitted.

COST OF A STATION AND FACILITIES.

Edward V. Maitland, a civil engineer formerly in the employ of the Pennsylvania Railroad, prepared and submitted a plan of the Pennsylvania right-of-way in the neighborhood of West Side Avenue. It showed in addition, the streets and buildings from a survey made on the ground. The plan shows West Side Avenue in its existing condition, except that it furnishes a pedestrian subway to the west side of said avenue with steps leading down. His plan involves only the shifting of the eastbound track of Pennsylvania Railroad about 13 ft. 10 in. from its present position and building the proposed station between the two present tracks. This plan provides for no gauntlet. We agree with the conclusion stated by Commissioner Treacy, in his dissenting report that the construction of a gauntlet or bye-pass would be necessary with a station at the suggested location.

It is probable that the "Maitland station" could be constructed for \$23,065.00, the amount of his estimate. He stated, however, that this did not include the work usually done by the railroad company; the additional work by the company on the subway, station building, kiosks, track and third rail would increase his total to \$38,705.00. This amount, in his opinion, included the proper allowance to cover the maintenance of traffic, the operation of the steam and electric trains passing over the tracks during construction.

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Mr. Brackenridge and Mr. Gray are of the opinion that this amount is a high estimate of what would be actually needed for station facilities and incidental charges.

Against this is the estimate of Mr. Forgie for the railroad company of about \$390,000.00, and the lowest figure mentioned by any railroad official or witness is \$100,000.00 by Mr. Shepard, general superintendent. The respondent insists that a station constructed in the manner proposed by the Maitland and Gray plan would be entirely impractical from an operating standpoint, and therefore ought not to be seriously considered.

On this station plan of Mr. Maitland's the Pennsylvania standard cars will clear the platform a little less than four inches and the Hudson & Manhattann nine and three-quarter inches. Doubtless there are many points at stations located on a curve both on the subways and elevated roads in New York City where the point of the car is twelve inches or more distant from the platform, but not where passengers pass to and from trains, if it is possible to avoid such construction.

Engineer Reeves testified that all stations on the new subways are now being located on tangent to avoid such gaps.

Engineer Savage stated that in no case does the gap at Morris Park station (L. I. R. R.) exceed five inches; that where the space is twelve inches or more distant from the platform, as referred to by one or two witnesses for the petitioners, passengers do not pass to and from trains.

The Interborough Rapid Transit Company's Accident Classifications for June and July, 1916 (Exhibits R-3 and R-4) are alarming in showing the accidents due to falling in space, between platforms and cars.

Good engineering practice demands the gap be not more than three and one-half inches, and anything over six inches invites danger. The ideal condition, however, cannot always be obtained.

We do not think that an expenditure of \$390,000.00 on the plan suggested by Mr. Forgie is either necessary or warranted to afford proper facilities at West Side Avenue. It is probably true that a station, platform and passenger subway could be built of good and substantial materials at an expense of approximately \$40,000.00, and this amount might also include the spreading of

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the two tracks now there, but this could hardly be said to meet the requirements. There should be a gauntlet or a bye-pass and all the signal appliances necessarily required if there be a gauntlet. There must also be added the cost of acquiring the necessary lands and the material track changes, which in the total, in our judgment, would increase the outlay to at least \$100,000.00.

On this capital outlay the company must be allowed interest, also allowances for annual depreciation and taxes, which are not small items. The incidental expenses of station agents, clerks, ticket choppers, platform men and illumination have been variously estimated from \$18,200.00 to \$27,000.00 per annum, exclusive of interest on construction.

Engineer Hill asserts the cost of the additional energy consumed by making a stop of the electric train including wear and tear would be forty-five cents, while in the opinion of Mr. Brackenridge it would be five cents with no allowance for wear and tear.

Mr. Brackenridge estimated that the expense per year of all station agents, clerks, ticket choppers, platform men and porter at the proposed station would not exceed \$4,288.00 and that the station could be illuminated for \$100.00 a year, but such estimates are entirely too low.

The cost of the desired station with the necessary track changes, signal appliances and lands as above outlined, and the expense of operating the same, independent of the necessary train equipment, could not reasonably be exacted of the Pennsylvania Company in view of what under the conditions would be the probable use of the station.

TRAFFIC PROBLEM.

The traffic problem is the most difficult for the petitioners and the public generally to understand. To make it convenient for the public, it is necessary to start trains from up-town and down-town New York at the same time; two minutes are dropped on the up-town line to permit waiting for or meeting the trains on the down-town line. Trains can make the run from up-town

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P. R. R. station in New York to Manhattan Transfer in about twelve minutes but actually make it in fourteen minutes. The run between Hudson Terminal down-town and Manhattan Transfer is figured at sixteen minutes but this schedule is not maintained because of existing traffic conditions.

There are now experienced daily delays morning and afternoon during the rush hours. Trains from Pennsylvania station up-town are delayed from one and a half to two minutes every night waiting for down-town trains.

The number of trains during rush hours on the P. R. R. line is twenty-five between seven and eight in the morning eastward and twenty-eight between eight and nine.

The general classes of traffic here present are electric, steam, passenger and fast freight. Slow freight lines cannot be used for passenger traffic on account of the congestion of slow freight.

The number of trains to and from Summit Avenue are approximately 1,000 per day. This includes the trains that run to 33d Street, New York, and to Hoboken. The portion of track where this severe dense traffic exists runs from Summit Avenue to 2,600 feet eastward. Through the interlocking station that controls Summit Avenue, there is a movement of between 480 and 525 trains per day one way on one track.

The petitioners' engineers have recommended a station at West Side Avenue, composed of merely spreading the southerly track, building a platform and shelter, which would mean that electric trains stopping here would have to stop on the main line. At Summit Avenue none of the electric trains stop on the main line; they stop on two tracks between the main line.

To provide for the congested traffic on this line which has already been pointed out, it is impracticable to make a stop at such a station as the petitioners suggest, and confirms our opinion that either a gauntlet or a bye-pass would be necessary at that point. It should be clearly understood that a stop at West Side Avenue does not merely influence the 435 trains passing West Side Avenue, but it also influences the 1,000 trains to and from Summit Avenue. Any continued delays or additional stops on the main track of the P. R. R. in Jersey City affects its schedule of all trains at the Manhattan Transfer. Inability to maintain

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schedules is at present being experienced at this point. All additional delays and stops on the H. & M. affect the traffic to Hoboken and 33d Street, New York City, so that the problem is not so simple as it would at first appear.

LOCATION OF STATION.

The undeveloped territory in the section of the city under discussion is between West Side Avenue and the Hackensack river. Here lies the prospective future development, which must be for factories and manufacturing plants. Such a growth is inevitable, but how soon and in what proportions such growth will come is only problematic. When such development, now so earnestly desired, becomes a reality, a station will be a necessity, but to best serve and accommodate the Marion section as then developed, would probably be located 1,000 feet or more west of West Side Avenue.

CONCLUSION.

After the most careful consideration of all matters submitted to us at the first hearing and on the rehearing of this petition and weighing all of the conditions involved in this proceeding, nothing has been produced in the evidence that would lead us to change our conclusions as announced in the original report, and the petitions will therefore be dismissed for the reasons therein fully set forth.

Dated April 24th, 1917.

DISSENTING REPORT.

By Commissioner Treacy:

I dissent for the reasons stated in the minority report filed by me upon the original hearing in this matter.

Dated April 24th, 1917.

Extension of Trolley on North Avenue, Elizabeth.

No. 423.**IN THE MATTER OF APPLICATION FOR EXTENSION OF TROLLEY
ON NORTH AVENUE, ELIZABETH.**

1. The Board is asked to direct a street railway to apply for a franchise to use a public highway.
2. The Board holds this should be done by it only where there is no doubt as to the justification for the extension.

Vail & McLean, for petitioners.

L. D. H. Gilmour, for Public Service Railway Company.

Application is made for an order to compel the Public Service Railway Company to construct, operate and maintain an extension of its street railway on North Avenue, from its present terminus to Meadow Street, Elizabeth.

It is admitted that said Railway Company has no franchise to build a line on North Avenue over the route set out in the petition nor has it taken any action to obtain such a franchise.

The Board of Works of the city adopted a resolution expressing its willingness to grant the franchise, if asked for, and the owners of the necessary amount of the lineal feet frontage have signed, in an informal manner, their consent to the construction of the desired extension.

Counsel for the petitioners realize the uncertainty of their position and suggest, as a preliminary step, that we direct the company to apply for the franchise. This, however, should be done by this Board only where there is no doubt as to the justification for the extension. The proofs in this case do not measure up to this standard.

After due consideration of all the details presented in the evidence and weighing the legal propositions involved, we conclude that under all the facts and circumstances developed in this proceeding, that the application should be dismissed.

Dated April 28th, 1917.

F. S. Holmes vs. Erie Railroad Company.

No. 424.**F. S. HOLMES****VS.****ERIE RAILROAD COMPANY.***W. F. Farmer*, for the complainant.*A. N. Hartung*, for the respondent.

The complaint in the above matter is that the train service on the Greenwood Lake Division of the Erie Railroad to Pequannock is insufficient. The complaint is particularly in regard to the train service from Jersey City to Pequannock after 7:10 P. M. Complainant asks that the train leaving New York at 8:15 P. M., which now terminates its trip at Great Notch, be continued to Pequannock, and that the 10:30 train, which for certain months of the year terminates its trip at Little Falls, and during the remainder of the year at Wanaque, be required to run the whole year to Wanaque.

There was testimony that employees of the Du Pont Powder Company, at Haskell, would make use of the 10:30 train which arrives at Haskell at about 11:45, and the Board on formal hearing recommended that the respondent operate this train to Haskell, and also run train to Little Falls, leaving Haskell at 12:20 A. M., for the accommodation of the powder company employees. The records put in evidence by the company indicate that there is not sufficient business for this train to warrant its continuance the year round. The total number of passengers on the train, excluding Saturdays and holidays, for the month that the train was put in operation was 492, and the total revenue \$72.09. It is claimed that only 301 passengers were New Jersey intrastate passengers, and \$48.00 of the above sum intrastate revenue.

Peoples Water Company—Approval of Ordinance, etc.

On the return train at 12:20 A. M., the showing is far worse because the revenue from that train was only \$7.62. During the whole month of November only nine commuters traveled on this train. It was testified that the cost of operation of the train from Little Falls to Wanaque, a distance of 24.8 miles, is \$15.08 a day. Under these conditions, the Board does not feel inclined to compel the company to assume the burden of the operation of these trains.

The complaint will be dismissed.

Dated April 28th, 1917.

No. 425.

IN THE MATTER OF THE APPLICATION OF PEOPLES WATER
COMPANY FOR THE APPROVAL OF AN ORDINANCE OF THE
TOWNSHIP COMMITTEE OF THE TOWNSHIP OF RARITAN, IN
MONMOUTH COUNTY.

1. Application is made for approval of an ordinance granting a privilege to a water company to use public highways to supply service. The territory specified includes territory in which another company is giving service.

2. The Board holds that if the ordinance should be approved it would be affording opportunity for future duplication of investment and plant to serve a community now lawfully served by a company ready and willing to serve and subject to the jurisdiction of the Board.

3. It is determined that the privilege or franchise conferred by the ordinance submitted is not "necessary and proper for the public convenience" and does not "properly conserve the public interests."

4. Approval is withheld. If the ordinance is amended to exclude territory served by the Keansburg Water Company it would in the present situation be approved.

Ackerson & Ackerson, for petitioner.

Elmer H. Geran and *Charles R. Snyder*, for Keansburg Water Company.

Peoples Water Company—Approval of Ordinance, etc.

This is an application for the approval of a privilege or franchise granted by ordinance of the Township Committee of the Township of Raritan to Peoples Water Company to lay, construct, operate and maintain its water pipes and water supply system and water works in and under certain roads, streets, avenues, beachways, parks, parkways and highways and other public places in said township, within described boundaries, for the purpose of supplying the residents thereof with water for public and private use.

The ordinance was finally passed and approved January 7th, 1916. It appears to be proper as to form and the statutory requirements incident to its adoption seem to have been complied with.

The objector, Keansburg Water Company, now operates in that portion of the township designated by the promoters thereof as New Point Comfort Beach, and now forming a large part of what is known as Keansburg. The settlement known as Keansburg embraces not only the area served by the Keansburg Water Company but other portions of Raritan Township, and that portion of Middletown Township immediately adjoining to the east. There is no system for public supply of water in the Township of Raritan, excepting that of Keansburg Water Company.

The territory included in the ordinance comprises, generally speaking, all of Raritan Township between the bay and the northerly boundary of Leonard's property on the south and the westerly boundary of the West Keansburg Beach Development. The portion thereof located between the bay and a line in the neighborhood of Seeley Avenue is now served by Keansburg Water Company. This company also serves a few customers outside the last mentioned area in Raritan Township and a few customers in Middletown Township. It has never been granted by ordinance the right to lay mains in any public streets by any municipal body.

In the development and sale of the lands of New Point Comfort Beach Company, and prior to 1913, that company constructed a water plant and laid a distribution system for the purpose of furnishing water to the inhabitants of that area. None of the streets and highways laid out and constructed was accepted by

Peoples Water Company—Approval of Ordinance, etc.

public authority and none has been accepted to this date. The right of the projectors of the enterprise to lay mains in streets wholly belonging to them, and to be dedicated to public use, has not been challenged. There has been no claim that the Keansburg Water Company is unlawfully occupying any street located within the limits of the private land development referred to. The company does not profess to enjoy any privilege to occupy any accepted road or highway, or to serve elsewhere than in the land developed by the Beach Company.

In the early part of 1913, this Board recommended to the New Point Comfort Beach Company that it separate its water business from its other activities and that a water company be formed to operate such business. Thereafter the directors and stockholders of the Beach Company organized and incorporated, according to the provisions of the water act, the Keansburg Water Company, "for the purpose of constructing, maintaining and operating water works and a water supply system in that portion of Raritan and Middletown Townships, County of Monmouth, and State of New Jersey, known as Keansburg, and the properties near or adjacent thereto, and for the purpose of supplying the town of Keansburg and the neighborhood adjacent thereto in the Township of Raritan and Middletown, with water." The certificate of incorporation is dated March 10th, 1913. Under date of March 21st, 1913, the Township Committee of the Township of Middletown, by resolution adopted by said committee gave its consent, as required by the statute, to the formation of said corporation "to supply water to the inhabitants of Keansburg and the surrounding neighborhood." A certificate was issued, under the seal of the township, signed by its chairman and attested by its clerk. Under date of May 8th, 1913, similar action was taken by the Township Committee of the Township of Raritan, and a certificate containing a recital of purpose in precisely the same language was issued. The certificate of incorporation and the consents of both Township Committees were, on May 22d, 1913, filed in the office of the Secretary of State.

On June 10th, 1913, this Board issued its certificate approving upon the application of the company, an issue of capital stock "for the purpose of perfecting the organization of said company."

Peoples Water Company—Approval of Ordinance, etc.

Subsequently, on February 10th, 1914, upon application therefor, this Board approved the purchase by said company of the water works and system, the creation of a mortgage and the issue of \$31,000 of bonds thereunder, and the issue of \$9,000 of stock, the proceeds of which were to be used in payment of said plant and system.

The company has since its organization submitted to the jurisdiction of this Board, as a public utility.

During the year 1915, the Keansburg Water Company made application to the Township Committee of Raritan Township for a privilege or franchise to serve in said township, but such application was never favorably acted upon. It was testified that it tendered itself willing to accept an ordinance in the precise form of the one granted to Peoples Water Company.

In this situation we are asked to approve an ordinance of Raritan Township granting the privilege to Peoples Water Company to serve in a portion of the township, including all of the territory now served by Keansburg Water Company. Amongst other things, it is urged that the failure of the Keansburg Company to secure a franchise would deprive it of the benefits of the rule laid down by this Board that it will not approve franchises for a company desiring to enter the same region as that served by a company operating under a franchise. (Re Application Atlantic Highlands Gas Company, 1911, Reports Board of Public Utility Commissioners of New Jersey, Vol. 1, p. 7, &c.; Consumers Gas Company of Millville, Vol. 1, p. 650; Phillipsburg's Light, Heat and Power Company, Vol. 2, p. 379.)

To this proposal we are unable to assent. It seems to us to overlook entirely the duty cast upon this Board by the statute, as well as the reasoning which supports the rule laid down in the Atlantic Highlands Gas Company case.

Section 24 of Chapter 195 of Laws of 1911, provides:

"No privilege or franchise hereafter granted to any public utility as herein defined, by any political subdivision of this State, shall be valid until approved by said Board, such approval to be given when, after hearing, said Board determines that such privilege or franchise is *necessary and proper* for the public convenience and properly conserves the public interests, and the Board shall have power in so approving to impose such conditions as to construction, equipment, maintenance, service or operation as the public convenience and interests may reasonably require."

Peoples Water Company—Approval of Ordinance, etc.

In the Millville case, *supra*, this Board said:

"This provision seems to us to lodge incontestably with the Board the duty and the right to decide, after hearing, when a privilege or franchise granted to a public utility by any political subdivision of the State 'is necessary and proper for the public convenience and properly conserves the public interests.' If, in the exercise of its legal discretion the Board shall decide that a duplication of apparatus for affording a given service, together with the associated double disturbance of the public highways, is 'not necessary and proper for the public convenience' and 'does not conserve the public interests,' the statute evidently empowers the Board to withhold its assent from a grant which would issue in public inconvenience or which would prejudice the public interests. Any other interpretation of this section of the law would empty it of all significance."

In the Atlantic Highlands case, the Board set forth at some length the considerations which moved it to withhold approval of a competing franchise. Applying this reasoning to the instant case, we are unable to conclude that the approval of the franchise is "necessary and proper for the public convenience."

The Keansburg Company is presently affording a reasonably satisfactory service to all who desire it within the territory in which it may serve. An effort was made to show that meritorious complaints had been made of its failure to furnish proper service. The testimony submitted related to a very few instances of unsatisfactory service. The Board has carefully considered the testimony and concludes that these isolated instances would not warrant a finding that the service is "improper" or that the facilities are "inadequate." As the demand increases, the company will be under the legal necessity of increasing its supply and its plant.

No complaint was made as to rates.

If this ordinance was approved, we should be merely affording opportunity for future duplication of investment and plant to serve a community now lawfully served by a company ready and willing to serve, and subject to the jurisdiction of this Board. This does not appear to be in the public interest. We determine, therefore, that the privilege or franchise conferred by the ordinance submitted is not "necessary and proper for the public convenience," and does not "properly conserve the public interests," and withhold approval.

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The duty and power to grant franchises are upon the municipal legislative body. Its judgment only controls as to whom they will empower to serve, and this Board would be reluctant to invade its functions. If the township committee concludes that it will decline to enfranchise the existing company to extend its operations into other sections of the township, its judgment is controlling. Having evidenced its preference to have service afforded by a new company, this Board will do everything consistent with the public interest and convenience to put its judgment into effect. If the ordinance submitted excluded the territory now lawfully served by the Keansburg Company, the Keansburg Company being without authority to extend its system beyond the limits heretofore described, we should approve it. If the ordinance is amended to exclude the territory served by the Keansburg Water Company, it would, in the present situation, receive our approval.

Dated April 28th, 1917.

No. 426.

**IN THE MATTER OF INVESTIGATION BY THE BOARD OF THE
SERVICE AFFORDED BY THE HACKENSACK WATER COMPANY.**

ABSTRACT OF THE REPORT.

Complaint is made, among other things, of a rule of the company providing that customers shall be held liable for damage to meters by freezing. The Board holds this to be a reasonable rule. A general notice printed on a bill that service will be discontinued if the bill is not paid by a certain date is held to be insufficient notice. Special notice should be given of intention to discontinue service.

IMPURITIES IN WATER.

Complaint that the company supplied water carrying sand and other impurities was found to arise from accidents at the filtration plant and to method employed in excavating for a new reservoir. Reasonable precautions appear to have been taken to prevent the recurrence of accidents at the

Investigation of Service Afforded by Hackensack Water Company.

filtration plant and the company, at the suggestion of the Board's engineer, adopted a different method for excavating. With respect to discolored water and effect upon piping of water chemically treated the Board finds:

The only waters available in sufficiently large quantities in the northern part of the State for general public supply are surface waters which require filtration.

DUTY OF COMPANY AS TO PURITY.

The duty of the water company is fulfilled, so far as purity is concerned, when it treats the water in accordance with the best modern methods. The testimony shows that water is so treated. In view of improvements and changes in methods made since the Board's investigation began it does not appear to be necessary to issue any order concerning either the repair, maintenance or reconstruction of the filter plant, or the new reservoir or concerning the method of treatment of the water.

EXTENSIONS OF SERVICE

With respect to extensions of service the Board holds that extensions into territory beyond that which is fairly well built up can only be made, under ordinary conditions, when they are self-supporting. It is not unreasonable for a water company to require as a pre-requisite to the making of an extension an assurance of reasonable revenue.

QUANTITY OF WATER AVAILABLE.

The quantity of water available in the Hackensack watershed is ample to meet the requirements of the people served for at least twenty-five and perhaps thirty-five years.

PRESSURES.

With respect to complaints of insufficient pressures, the Board fixes minimum pressures for the different municipalities served and decides that the company must make such additions and extensions to its pumping plant, transmission system and distribution mains as will result in the increase of pressures to the limits fixed.

HYDRANTS, METER DEPOSITS AND IMPROVEMENTS.

The Board further decides: That the company must install, upon application therefor by municipalities, hydrants therein in accordance with schedules fixed by the Board;

That the company's rule requiring a deposit of \$10.00 to guarantee payment of repairs to a meter damaged by freezing should be modified to provide for a deposit of a sum not exceeding \$5.00 for the ordinary house type of meter; that it should reconstruct of non-combustible material the floor in the main pumping station at New Milford; remove all wooden closets or lockers from engine and boiler rooms, install automatic non-return valves on all boilers not now so equipped.

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INFORMATION TO BE SUPPLIED BOARD.

That the company should file with the Board

A list of all customers and locations where pressures are insufficient to provide continuous service to all the fixtures in the building, together with a statement of the circumstances under which service was established in each case;

A list of all localities where the pressures and quantities available for fire purposes fall measurably short of the requirements fixed by the Board;

Information with regard to changes resulting in improvement in the conditions of service as such changes are made.

Appearances:

For the Hackensack Water Company—

W. M. Wherry, H. L. DeForest, George Holmes, F. G. Mygatt.

For Cresskill, Demarest, Edgewater and Tenafly—

W. J. Wright.

For Leonia, Fort Lee, Englewood Cliffs, Palisade Park, Norwood, Palisade Township, and Bergen County Board of Freeholders—

William M. Seufert.

For Carlstadt—

Otto J. Strasser, Fred Reif.

For Englewood—

Albert I. Drayton.

For City Club, Englewood—

Dan Fellowes Platt.

For Ridgefield—

S. G. H. Wright.

For the Town of Union and Weehawken—

E. Walscheid, Adolph H. Peter, William C. Asper.

For Hasbrouck Heights—

E. E. Fields.

For Cliffside—

A. M. Agnew.

For North Bergen Township—

Francis H. McCauley.

HISTORY OF THE CASE.

Under date of July 2d, 1914, the first hearing was held in the matter of the investigation of the justice and reasonableness of the rates of the Hackensack Water Company. At this hearing Hon. William M. Seufert, representing a large number of municipalities in Bergen County, stated that the people represented by him were very much concerned with regard to the character and sufficiency of the service furnished by the company,

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and desired to file complaints concerning these matters, "going into this question at a great deal greater extent than the mere question of rates; that is, the question of sufficiency of the service and the delays that come from that; besides that, the question as to whether or not the Hackensack Water Company has a plant sufficient to furnish the district or whether they could, in any event, furnish the district they are attempting to furnish at the present time; whether their watershed, under any circumstances, could accommodate all the territory they are attempting to furnish. Our complaint goes into the quality of the water, the question of the amount of water furnished, the question of pressure furnished, and the minor details that are collateral to this subject." Judge Seufert emphasized the necessity for better fire protection: including increased pressures in many sections and increased volumes of water. Mr. Walscheid, representing certain Hudson County municipalities, also emphasized the matters of which Judge Seufert spoke. The Commission decided that the questions of the character and sufficiency of service, the rules and regulations of the company, and other matters not directly connected with the subject of rates, should be considered in a separate proceeding.

In the summer and fall of 1914 formal petitions were received from the Boroughs of Tenafly, Cresskill, Fort Lee, Leonia, Englewood Cliffs and Palisade Park, and from the Freeholders of Bergen County. These alleged that the service of the Hackensack Water Company was, in many respects, inadequate and improper, and that the rules and regulations enforced by the company were, in many respects, unreasonable. These complaints were served upon the Hackensack Water Company and answered. At various times there had been other complaints concerning inadequacy of pressure in Carlstadt, East Rutherford, Rutherford and Hasbrouck Heights. In view of the fact that the Hackensack Water Company furnishes service in fifty-one municipalities, that its rates would have to be consistent and proper in all of the municipalities served, and that its rules and regulations would have to be made uniform for all customers, the Board decided to merge the complaints referred to into a general proceeding and to this end, on February 2d, 1915, ordered a general inquiry "to determine whether the said Hackensack Water Company furnishes

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safe, adequate and proper service, and keeps and maintains its property and equipment in such condition as to enable it to do so." Copies of this order were served on the Hackensack Water Company and upon each of the municipalities and the matter was set down for hearing.

The hearings were subsequently held at various places to give opportunity for local residents to attend and testify. These hearings were held at the Board's office in Newark, at the Chancery Chambers in Jersey City, at the town hall of the township of North Bergen, at the Court House in Hackensack and at the State House in Trenton.

HISTORY OF THE COMPANY.

The original Hackensack Water Company was chartered by special act of the New Jersey Legislature in 1869. The property and franchises, by virtue of certain proceedings taken by the Court of Chancery, were afterwards sold and conveyed under a receivership and acquired by the present company, and in 1880 the original company was duly reorganized under the name of the "Hackensack Water Company, Reorganized." In 1881 this company was consolidated with the Town of Union Aqueduct Company et al., under the name of the "Hackensack Water Company, Reorganized," and in 1902 a certificate of change of name from the "Hackensack Water Company, Reorganized" to "Hackensack Water Company" was filed with the Secretary of State. Further details of the history of this company are given in a report by the Board in the matter at hearing as to whether the existing schedule of rates of the Hackensack Water Company is just and reasonable, the said report bearing even date herewith.

DESCRIPTION OF THE PLANT AND SYSTEM.

The Hackensack Water Company owns and controls all of the property and the works connected with the collection and distribution of water in the territory which it serves, there being no subsidiary companies except that the Rutherford Water Company

Investigation of Service Afforded by Hackensack Water Company.

and the Boiling Springs Water Company act, in a sense, as fiscal agents for the Hackensack Water Company.

No complications are, therefore, introduced which make it necessary to subdivide the property and plant of the Hackensack Water Company among subsidiaries, nor are any questions with regard to the adjustment of earnings and expenses between such subsidiaries involved.

Except that the Hackensack Water Company purchased, substantially at cost, a small plant, styled the Westwood Water Company, operating in the Borough of Westwood, and except for the original plant acquired from the old Hackensack Water Company, the entire plant has been built and extended by the Hackensack Water Company.

The original Hackensack Water Company was incorporated for the purpose of supplying the old village of Hackensack. This company owned and operated a pumping station, since removed, located on the west bank of the Hackensack river in the present Borough of Riverside. Water was pumped from this station through a 12-inch main to the Cherry Hill reservoir, which is still extant and owned by the present Hackensack Water Company, but no longer used. From the Cherry Hill reservoir, water was distributed to the village of Hackensack through a small distribution system. The exact extent of the original distribution system in the village of Hackensack we have not been able to determine, but as its cost does not exceed two per cent. of the cost of the present distribution system, it was not important to determine, as all of the mains now extant have been included in the inventory.

Shortly after the acquisition of the original Hackensack Water Company in 1880, the "Hackensack Water Company, Re-organized" entered into contract to supply the City of Hoboken and for this purpose acquired property at New Milford, and in 1881 commenced the erection thereon of a boiler house and pumping plant.

When this pumping station was erected there was an old race-way, running parallel with Newkirk Avenue, which conveyed water to operate an old mill, situated to the south of the present New Milford railroad station. Water was diverted into this old

Investigation of Service Afforded by Hackensack Water Company.

raceway by two timber dams which had been placed across the Hackensack river on either side of a small island immediately to the north of the Newkirk Avenue bridge. This raceway was used for the purpose of conveying water to an intake. It has since been dredged out and widened to form part of the present collecting basin.

At the time of the construction of the original pumping station at New Milford, the intake was located at about the same point as the present intake, or immediately adjacent to the present railroad station. A conduit led from thence to a circular settling basin about 110 feet in diameter, from whence the water was carried through a 48-inch circular brick conduit to an old pump well. In 1889, at the time the present Dam No. 1 was built, this old intake and the supply basin were filled in and a new 48-inch cast iron and brick conduit was carried from Dam No. 1 to the pumping station. In 1910 this old 48-inch conduit was supplemented by a new intake and wasteway, completely equipped with screens, sluice gates, &c., and the water is now conveyed from the intake to a suction supply well through a rectangular open concrete channel. From this suction well a new 54-inch supply main has been laid to connect with a new thirty million gallon low lift centrifugal pump, which has been installed to supplement the two present twenty-four million gallon low lift units.

At or about the same time that the New Milford pumping station was installed, a 20-inch transmission main was laid from New Milford to low service reservoir No. 1, Weehawken, which supplied the low service consumption in that district.

In 1883 the construction of reservoir No. 1 was completed, together with a high service tower located immediately adjacent thereto. The tower at that time contained three boilers which are still in place, two of which are obsolete and one of which is used to furnish steam for heating the adjacent office buildings and shops. It also contained two pumps, which were later removed to a new engine room which was added in 1891 where they still remain on their foundations.

These pumping engines obtained water from the low service reservoir No. 1 and delivered it into the tower tank, which was part of the original Weehawken high service system. The water

Investigation of Service Afforded by Hackensack Water Company.

was distributed from this tower to the higher elevations in this vicinity.

Connection was made between the 20-inch transmission main and the Cherry Hill reservoir, which was used to supply the Hackensack low service until about 1904, when this reservoir was abandoned. The Hackensack high service was supplied directly from the 20-inch main.

This system, roughly outlined, may be said to form the nucleus of the present Hackensack Water Company's system.

From this date on, the history of the company is one of active and continuous development.

In 1886 an addition was made to the original boiler house at New Milford and three new boilers were installed therein, which have since been removed, as were the original boilers. At this time, the first addition was made to the engine room and a new five million gallon engine was installed therein. This engine has since been dismantled to make room for the new thirty million gallon low lift pump.

In 1889 a 24-inch transmission main was laid from New Milford to Weehawken to supplement the original 20-inch main.

In 1891 a second addition to the engine house at New Milford was made and a ten million gallon engine added.

In 1892 the first of the circular tanks, constituting the Carlstadt reservoir, was installed and the 12-inch Rutherford extension through Hasbrouck Heights was made and the supply of Rutherford and East Rutherford inaugurated.

In 1892 the Englewood high service pumping station was built, the standpipe at that point erected and the Englewood high service system installed.

In 1896 the Weehawken low service reservoir No. 2 was constructed and a second 12-inch main was extended from the 20-inch transmission main at Little Ferry to augment the Rutherford supply.

In 1898 a new boiler house was erected and the old boiler house at New Milford was abandoned and has since been converted into a coal storage shed. Four 250 h.p. water tube boilers were installed at this time.

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In 1898 a third addition to the engine house at New Milford was built containing a twelve million gallon and an eighteen million gallon pumping engine.

In 1899 the second Carlstadt tank was built.

In 1901 a 30-inch transmission main was laid from New Milford as far as Ridgefield to supplement the two existing mains.

In 1901 high service reservoir No. 3 was built, an extension was added to the Weehawken pumping station, a new ten million gallon vertical triple expansion engine was erected, and a 16-inch force main was laid from the Weehawken pumping station to reservoir No. 3, which was used in lieu of the tower for the Weehawken high service.

In 1902-03, the company having acquired land to develop a reservoir at Oradell, north of Veldron's mill, a considerable quantity of land was cleared and grubbed, berms were erected, a conduit and drain constructed, and other work done towards the completion of a reservoir for the purpose of increasing storage. This work was later suspended, and work was immediately commenced on the Woodcliff reservoir, which was completed and placed in service in the latter part of 1905 or the early part of 1906.

In 1904 a 36-inch transmission pipe line extension was made from Ridgefield to New Durham pumping station and thence through to Hudson Boulevard, whence a 30-inch line was laid to connect with reservoirs No. 1 and No. 2.

About this time 36-inch and 30-inch high service pipe lines were laid between New Durham pumping station and reservoir No. 3.

In 1904 the New Durham pumping station was erected and in the same year the filter plant was installed at New Milford.

At the time the New Durham high service was installed the ten million gallon pumping engine, formerly located at Weehawken, was transferred to New Durham and the Weehawken pumping station was put out of service, all of the high service pumping being done from the New Durham plant.

In 1906 an extension was made to the boiler house at New Milford and two new 500 h.p. boilers installed therein.

At the present time it is proposed to inaugurate another service and to lay a new main from the New Milford pumping station to the proposed reservoir No. 4 at Alpine for the purpose of

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supplying the higher elevations to the north of the Englewood high service as well as the Englewood high service area, and when this addition is complete the present Englewood high service pumping station and standpipe will be abandoned.

This high service system will in addition have a connection with reservoir No. 3 where water may be delivered to supplement the pumpage from the New Durham pumping station and to relieve the necessity of double pumpage through this station, whenever possible. This improvement is desirable by reason of the growing population requiring service on the high levels of the Palisades, and the low pressure now necessarily given at some points.

In 1912 a new twenty million gallon triple expansion pumping engine was installed at New Milford and the capacity of the filters was doubled.

It will be noted from the above description that a very large part of the facilities of the company is utilized for the purpose of carrying large quantities of water southeastward to Hudson County, the total amount of water being sent in that direction amounting to approximately 75 per cent. of the total pumped.

Of the water pumped from New Milford about 55.8 per cent. is repumped into the low service distribution system at the New Durham pumping station; 26.5 per cent. is repumped into the Weehawken high service system, or into reservoir No. 3 located at the highest point in Fairview; about 2.7 per cent. is repumped at the Englewood pumping station for distribution in the Englewood high service system; and 15.9 per cent. is delivered direct from the transmission mains to the communities along their routes or through the two 12-inch take-offs which supply the Carlstadt reservoir and the Rutherford district. In addition, a 12-inch transmission line runs north direct from the New Milford pumping station to supply the Boroughs of Emerson, Westwood, Hillsdale, &c. A second 12-inch transmission main connects with the 24-inch transmission line in the Borough of Dumont to supply the communities northeast of New Milford and north of Englewood.

During the year of 1913 the Hackensack Water Company delivered from New Milford into the distribution system an average

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of 26,808,000 gallons per day. In addition, about 884,000 gallons per day were consumed for washing the filters, and for local use at the New Milford station, giving a total daily draft from the Hackensack river of 27,692,000 gallons per day. The distribution of the water delivered into the system and the net pressures against which it is pumped, are as follows:

3.1 per cent.	is pumped against 18 feet pressure.
15.4 per cent.	is pumped against 320 feet pressure.
53.1 per cent.	is pumped against 380 feet pressure.
25.8 per cent.	is pumped against 490 feet pressure.
2.6 per cent.	is pumped against 600 feet pressure.

giving an average net pressure head for the entire supply of 400.7 feet.

According to the figures of consumption and population for 1913, the average daily per capita consumption is 93 gallons and the consumption per consumer is 110 gallons. Estimates based on the growth of the territory indicate that the average daily consumption in 1920 will be not less than 38,000,000 gallons per day and in 1930, 58,000,000 gallons per day. The growth of the territory requires still greater additions to the pumping plant and transmission system, as well as a great many additions to the distribution system. Several plans have been considered for this development. The plans which appear to be not only most feasible, but most economical in view of the added pressures provided and the additional territory served, involve a new transmission main from New Milford to Rutherford, passing through Hasbrouck Heights, a new transmission main from New Milford eastward to the top of the Palisades, an additional reservoir at Alpine and a new large transmission main from Alpine southward along the top of the Palisades to Hudson County. In addition, more pumping capacity must be installed at New Milford.

There are a great many dead ends and weak points in the distribution system of the company and it will be necessary to connect up these various dead ends and weak points. It is estimated that the completion of the plans referred to above will involve the expenditure of approximately \$1,700,000, of which between

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\$500,000 and \$600,000 will be needed entirely in connection with the work of eliminating dead ends and completing the network.

There are approximately 35,000 consumers of water supplied through meters, including metered consumers in Hoboken. In Hoboken there are about 1,650 consumers supplied on fixture rate basis. That city owns its own mains. All consumers in that city, whether metered or unmetered, are the customers of the city and the company has no control over them. All meters used in Hoboken, however, are owned and maintained by the Hackensack Water Company.

SOURCE OF SUPPLY.

Water supplied by the Hackensack Water Company is taken from the Hackensack river at New Milford. It is all purified in a filter plant of the gravity mechanical type and sterilized by the use of calcium hypochlorite.

DRAINAGE AREA.

The watershed of the Hackensack above the head of tidewater at New Milford includes about 114.8 square miles. A steadily increasing suburban population is distributed in a number of small villages throughout the watershed. This increase is not sufficiently rapid to be a menace to the efficiency of the filters or the quality of the filtered water in the near future, particularly as the state regulations regarding pollution are becoming more and more exacting. This shed is heavily covered with drift, sand and gravel, especially in the flatter portions of the valley. There is much flat and some marshy land near the stream, particularly in the lower regions, and it is this flat area which is being dredged for reservoir purposes. The general elevation of the watershed ranges from 0 to 400 feet and averages about 200 feet. It has the reputation of having a well sustained dry weather flow.

At the present time there is one completed collecting reservoir known as the Woodcliff reservoir located in the Borough of Woodcliff on Pasack creek, a branch of the Hackensack river, about

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five and a half miles above the point of intake. This reservoir has a storage capacity of 889,000,000 gallons and a tributary watershed of fifteen square miles.

In addition to the Woodcliff reservoir, the company has acquired about 1,400 acres of property, not including that required for the development of the new collecting basin and intake, in anticipation of the construction of a large impounding reservoir known as the Oradell reservoir located about one mile north of the New Milford pumping station. This reservoir is being developed by the erection of a dam across the Hackensack river, the construction of berms adjacent to and at the sides of the reservoir and the excavation of material from the reservoir site by means of suction dredges. This material is pumped behind the berms and raises the level of the flats in their rear.

A temporary crib dam was constructed and two large dredges, one of 20-inch and the other of 12-inch discharge, have been built and placed in service. The dredging operations are carried on continuously throughout the entire twenty-four hours. This reservoir has been under construction for about five years and it is estimated that it will take another five years to complete it, at which time it will have an estimated capacity of 7,389,000,000 gallons. When completed the elevation of the water in the reservoir will be about twenty feet above mean high tide.

THE COMPLAINTS.

The complaints submitted and testified to at the various hearings cover the following points:

1. The general rules and regulations of the water company.
2. The quality of the water furnished.
3. The pressures under which water is supplied to private houses.
4. The pressures under which water is supplied for fire protection.
5. The quantities of water available.
6. The conditions under which extensions of mains are made.

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RULES AND REGULATIONS.

The rules and regulations of the Hackensack Water Company were formulated many years ago, and have been in use, practically without change, since the commencement of operations by this company. The rules especially attacked were, first, the rule of the company providing that repairs to water meters, under certain conditions, should be paid for by the customers. This rule provides that consumers will be held responsible if meters are frozen. It has been the practice of the Hackensack Water Company, when a meter has been frozen or damaged by freezing, to remove the meter and send it to the company's shop for repairs, at the same time requiring the customer to deposit with the company the sum of \$10, out of which the cost of repairs was to be paid. This deposit was required before a new meter would be installed and service continued. The matter of requiring a customer to protect the meter installed upon his premises has been dealt with by the Board in general rules and regulations recently promulgated, and the rule referred to is found under the suggested rules and regulations for adoption by the companies:

"Meters will be maintained by the utility so far as ordinary wear and tear are concerned, but damage due to freezing, hot water, or exterior causes shall be paid for by the customer."

The Board considers it not only reasonable, but proper, that the cost of repairing a frozen meter shall be borne by the individual customer. Testimony submitted at the hearing developed that the ordinary cost of repairing a frozen meter was very much less than the amount of \$10 which the company required as a deposit to insure payment of repairs. For the ordinary house meter the Board considers the sum of \$5 ample protection to the company for cost of repairing such a meter, and the company's rule in this respect must be revised.

Complaint was also made with regard to a notice sent out by the company to each of its customers on May 1st, 1915, that commencing with the July, 1915, quarter, the company proposed ending the use of cut-off notices for non-payment, by arranging to

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have all bills in the hands of customers on the first day of the month following the end of each quarter thereafter; that the bills would be due when received by customers and payable on or before the 10th day of each month following the end of each quarter thereafter. No additional notice of any kind would follow the regular quarterly bill, as such notices calling attention to delinquency in the matter of payment had caused annoyance. In place of the old practice of sending a written notice, the collector will now give a personal notice prior to issuing the order for discontinuance of service. Payment to the collector will eliminate the necessity for discontinuing the service. The right to discontinue service has been dealt with by the Board in general rules and regulations recently promulgated, and the rule referred to is found under the suggested rules and regulations for adoption by the companies, where it is provided that:

"Service * * * may be discontinued * * * : (g) For neglecting to make or renew advance payments or for non-payment for water service or any other charges accruing under the application."

The Board does not consider reasonable, however, this new rule of the company which omits special notice where there is intent to discontinue service. The rule which the Board considers reasonable is as follows:

"6. **BILLS.**—If a bill remains unpaid for a period of over fifteen days after mailing or presentation, notice will be served or mailed that unless the bill is paid within seven days from the date of such notice the water supply will be discontinued. When the water is turned off under such conditions, it will remain off until the amount owing is paid in full, or until satisfactory arrangements for payment have been made."

The new modified rule of the company, providing for a personal notice, complies with the rule quoted above.

Complaint was also made with regard to the rules of the company, providing for a charge for connection or reconnection of service. These matters have been passed upon in the general rules of the Board and the following are considered reasonable:

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"(a) No charge shall be made for turning on the water when service is first established to a new customer.

"(b) When service is discontinued, due to lack of occupancy, a charge may be made for turning off and turning on the water, this charge not to exceed \$1.00 for the two purposes. When the meter has been removed for repairs for which the customer is responsible, a charge may also be made for the cost of changing the meter, not to exceed \$1.00."

The above charge for turning on and turning off the water refers to the turning on and off at the curb stop; when it becomes necessary to turn off the water at the main, involving an excavation in the public street to accomplish this, the company's charge of \$5 is considered reasonable.

Testimony was submitted by a number of residents of North Bergen Township and vicinity to the effect that the company had failed to notify customers when there was a temporary stoppage in the water service. Testimony submitted by the company was to the effect that such notice had actually been given and there appears to be some dispute as to the facts, but the company contended that it was its rule and its practice to notify all customers affected by a temporary closing of a main involving a stoppage of service. The Board considers it essential that such rule should be adhered to as rigidly as circumstances will permit, in order (1) that customers may store water to last them for the short period while service is off, and (2) that customers may take necessary precautions with regard to kitchen boilers and heating apparatus.

QUALITY OF THE WATER.

Complaints concerning the quality of the water alleged:

1. That at certain times the cold water, as drawn from the faucet, had been muddy, discolored and contained considerable sediment, and that at other times it was milky and appeared to contain a good deal of air.

2. That the hot water was frequently red or brownish in color and deposited a scum in bathtubs and was unfit for bathing or laundry purposes.

3. That pipes were clogged because of the action on these pipes of "chemicals" contained in the water.

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4. That the water, generally, was impure and unfit for drinking purposes.

In support of this, a large number of letters were submitted from residents of Englewood, giving individual opinions as to the quality of the water.

All waters supplied in this State, whether by a water company or by the purveyors of bottled water, are required to be tested by the State Board of Health at least four times in the year. The inspectors of the State Board of Health are traveling about the State continually, and, from time to time, without notice, visit the various water plants and either obtain samples which are later tested at the laboratories in Trenton, or inspect the testing work being carried on in the laboratories maintained by the various water companies. The supervision by the State Board of Health of New Jersey is very thorough and the results obtained are very satisfactory. No water supplied in this State can, for any extended period of time, be injurious to health.

The water supplies available in different portions of the State are taken, in some cases, from wells of different depths and from lakes, ponds and streams. Many well waters are suitable for use without treatment of any kind, although most of them are what are known as "hard" and difficulty is experienced in laundry work with water of this kind. As a rule, however, well waters are more pleasing to the taste. The water obtained from wells in some parts of the State is heavily impregnated with iron, and special precautions have to be taken to remove this iron. In Camden, Red Bank and Asbury Park, the treatment for the removal of iron has never been wholly satisfactory. In Merchantville the amount of iron found in the well water is such that treatment is more satisfactory.

The waters obtained from some of the lakes and ponds are of such character that they may be safely used without treatment. This is only true where the watersheds are almost entirely uninhabited. Almost all waters taken from the streams of the State must be filtered and sterilized before being pumped into the service mains. The filtration is not quite the same in all cases, but is designed to remove various impurities largely composed of vegetable matter. In general, the treatment of surface water in this

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State consists of first adding varying amounts of aluminium sulphate, which precipitates the greater proportion of the impurities; second, the passage of the water through filters of various types, in which is removed the balance of the precipitated matter; third, the addition of calcium hypochlorite which is used to complete the sterilization of bacteria. Ninety per cent. or more of the bacteria in ordinary practice is removed in the ordinary filters. The final sterilization results in reducing the bacteria to zero or to negligible quantities, and results in the absolute elimination of all bacilli which are dangerous to human life.

All surface waters and some well waters contain carbonic acid gas and some oxygen. Whether or not the presence of these gases will have a corrosive effect upon the iron pipes will depend upon the "hardness" of the water. Carbonic acid gas is not dangerous to the human system, this being the ordinary gas used in making "soda water."

Under certain conditions waters containing carbonic acid gas and oxygen have a corrosive effect upon the interior of steel or iron pipes to a very slight extent when the water is cold, but to a very marked extent when the water is heated. This corrosion is very much greater when the water is under heavy pressure. The clogging of house service pipes is due to deposits on the interior surface of the pipe of materials carried in the water. Filtration removes most of such material, but not all of it. The so-called "red water" troubles are encountered only in the hot water systems within the houses.

Red water may be defined as discolored water made cloudy or turbid by quantities of more or less finely divided oxide of iron which is carried in suspension and is introduced into the water as a rule during its passage through the house piping system. The term as usually applied relates to rusty water or water containing iron in sufficient quantities to make it objectionable. While red water may be produced in cold water piping, it is usually a hot water trouble, and the troubles usually met with are of a physical rather than a hygienic character. Red water troubles are largely problems of corrosion, as already stated. The amount of color and sediment in red water varies in different points in the same distribution system and even in the same house piping on different

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days. It should not be confused with the slightly turbid water which is momentarily discharged when the faucet is opened in the morning, or after the water has been allowed to stand in the pipes for some length of time, and which disappears quickly if the faucet is opened for an instant, to flush out the pipes. Neither must red water be confused with the rusty water which sometimes results from the incrustations which are formed by the corrosion of the iron pipes in the distribution system. Tuberculation in the piping system is common in most water plants, but fortunately the tubercles are firmly fixed to the inner surface of the pipes, and may exist without causing discoloration of the water, except when there is violent agitation of the water due to change in direction of flow, or other causes, which physically dislodge the tubercles.

There have been many investigations made with a view to determining the cause and remedy of red water. The cause is now pretty well determined, as already stated; as being the corrosive action upon the interior of the hot water piping caused by the presence of free carbonic acid and oxygen. This action is most marked when the water is soft or, in other words, contains sulphates; and is entirely absent in hard waters, or, in other words, waters containing carbonates. Professor Whipple of Harvard has made an exhaustive series of tests to determine the causes of red water and his experiments show that the corrosion resulting in red water is much greater when the water is under pressure.

Filtration increases the amount of carbonic acid present.

Laboratory experiments show that the speed at which corrosion takes place is proportionate to the amount of carbonic acid present and that the volume of corrosion is proportionate to the amount of dissolved oxygen present. It is the amount of dissolved oxygen present, therefore, that determines the amount of corrosion or red water, provided the water contains sufficient free carbonic acid to start the chemical reaction. These reactions take place very slowly in cold water. Heat increases the action of the carbonic acid and oxygen, causing the reactions to proceed much more actively and reach completion in a shorter period of time. Heat hastens corrosion in four ways:

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1. By hastening the chemical action produced in the solution of iron.
2. By increasing the amount of free carbonic acid, since heat sets free the half bound carbonic acid found in the sulphates.
3. By creating convection currents which cause the dissolved oxygen to diffuse faster, and hence come in contact with dissolved iron more rapidly.
4. By hastening the chemical actions involved in the precipitation of the dissolved iron.

The above explains why water drawn from fire hydrants or even from the cold water faucet may be free from red water, whereas the hot water faucet will deliver a water heavily charged with such sediment.

Steel pipe corrodes more rapidly than wrought iron pipe and wrought iron pipe more rapidly than cast iron. Galvanized iron pipe shows a greater resistance to corrosion at first than the plain pipe, but gradually the rate of corrosion increases and it may be remarked in passing that it is difficult to obtain a good galvanized coating of pure zinc.

REMEDIES.

Obviously, the remedies lie in (1) decreasing the carbonic acid gas; or (2) increasing the alkalinity; (3) decreasing the pressure under which the water is heated. It has been found in practice that if the alkalinity of soft, corrosive waters is artificially increased corrosion is stopped, or at least greatly diminished. The retarding effect of the alkalinity may result from (1) the formation of scale, due to the deposition of the carbonates of lime and magnesia on the inner surface of the pipe, thus creating a protective coating which prevents corrosion; or (2) a reduction in the carbonic acid, due to the reaction between the lime and the carbonic acid present in the water, when the lime is introduced in the form of calcium hydrate (slaked lime).

The phenomenon referred to is a simple one and is known to every householder. The calcium hydrate is mixed with water to form a supersaturated solution of what is known as "milk of lime." This is equivalent to a strong solution of ordinary lime

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water as used to sweeten milk for infants, as the milk of lime is a supersaturated solution which carries a certain amount of lime in suspension so that this solution must be continually agitated by mechanical agitators.

Water supplied in Queens County, Long Island, contains nearly twice as much carbonic acid as the Hackensack water, but due to the fact that the alkalinity of the Brooklyn water is nearly seven times as great as that of the Hackensack water, no red water troubles result in that case.

The only remedy in the control of the water company is to increase the alkalinity of the water so as to eliminate any corrosive action on the part of the free carbonic acid. There, however, remains a remedy which may be applied by the individual householder, and that consists in so arranging the piping of the hot water system that the water supplied to the kitchen boiler is supplied from an open tank located a few feet above the level of the highest hot water fixture in the house. In addition, a connection must be taken from the highest point of the boiler and carried to a point several feet above the level of the water in the tank; this pipe must be so arranged that gases may "boil off" and pass upward freely.

Specific testimony was submitted by residents of Englewood which showed that on certain dates water carrying sand and other impurities had been taken from the faucets. This was later explained by the fact that on the given dates accidents had happened in connection with the filter plant which accounted for the especially bad water on the dates in question. For a period of about two and a half years, however, the water, generally, has not been as good as in former years, although the chemical analyses showed that there were no dangerous impurities present. This excess in impurities was due to the method of excavating the new reservoir at Oradell, work on which had commenced extensively in 1912. The new reservoir consists of an artificial lake extending over a large tract of marshy land through which the Hackensack river formerly ran. The excavation was done by means of hydraulic dredges floating upon the surface of the river and lake.

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Underneath the river and contiguous territory there is found a bed of finely divided clay. The action of the dredge stirred up this clay and it was carried, suspended in very finely divided particles, into the filters and considerable quantities actually passed through the filters and into the distribution system. During this particular period the amount of chemicals required in filtering the water was from three to four times as much per million gallons as it had been before the construction of the reservoir was commenced. Since the hearing in this matter was first inaugurated, the company has, upon the suggestion of the Board's engineer, adopted a different method for continuing the extension of this reservoir. This is by the excavation of the reservoir in separate sections, separated from the main reservoir. For some months past the water in the main reservoir has been clear and entirely free from suspended clay, except as affected by heavy rains. The principal accident to the filtration plant referred to above was caused by, first, the breaking of a pipe through which the dissolved aluminium sulphate was fed into the water on its way to the sedimentation basin. This pipe has been renewed by very expensive brass pipe and such precautions have been taken in connection with its installation that an accident from this source will probably never occur again. The second important accident was the toppling over of a mass of sediment which had accumulated toward one end of the sedimentation tank. This tank is an open reservoir and about 250 x 300 feet in extent and contains enough water for ten or eleven hours' supply. Its size is ample for proper sedimentation purposes and a great part of the precipitated material is retained in the sedimentation tank. Prior to the accident referred to, there had never been any satisfactory method for removing the sediment from the tank and as a result of the accident a permanent pumping system with associated suction pipes has been installed by means of which the sediment is removed several times in the month before any great amount of it can accumulate. On this account it is probable that no similar accident will ever again occur.

Since the method of continuing the construction of the reservoir has been changed, as referred to above, the amount of chemicals required in the filter plant has been reduced to normal and the

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difficulties experienced by householders, due to this cause, have been reduced to normal or entirely eliminated.

With regard to the red water troubles, that is the discolored hot water, since the hearings in this case commenced, at the suggestion of the Board's engineer, the company has somewhat changed its treatment of water by adding a lime treatment designed to reduce the entrained carbonic acid gas. The result of this treatment has been to very materially reduce the red water troubles complained of.

In any case, it must be understood that the only waters available in sufficiently large quantities in the northern portion of the State for water supply purposes are surface waters; these require filtration and the duty of a water company is fulfilled, so far as purity is concerned, when it treats the water in accordance with the best known methods. Testimony was submitted by the experts of the State Board of Health, on the occasion of the hearing in Trenton, showing that the company was living up to all of the rules and regulations imposed by the State Board of Health, that the water was pure so far as health is concerned, and that it was being treated in accordance with the best known methods.

In view of the improvements which have been made and the changes in methods which have occurred since this investigation was inaugurated, it does not appear necessary to issue any order concerning either the repair, maintenance, or reconstruction of the filter plant, or of the new reservoir, or concerning the method of treatment of the water. The accidents which resulted in bad service have themselves led to remedies which will probably preclude the recurrence of such accidents and the general character of the company's property and the character of its maintenance are such as to indicate continued safe, proper and adequate service in so far as quality of the water is concerned.

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SERVICE PRESSURE FOR PRIVATE SUPPLY.

Much testimony was submitted showing that pressure in some portions of the territory of the company was insufficient to provide proper service on the upper floors of residences. Insufficient

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pressure in such cases was not confined merely to the upper levels in Englewood, but it was found that the upper edges of the lower service, known as the New Milford service, were provided with insufficient pressure. In Englewood the houses in the latter zone could be supplied from the upper level, but at an increased rate for service, and not until some additional investment has been made. Insufficient pressures were found in some parts of Woodridge, East Rutherford, Fort Lee and Leonia.

As a result of the facts brought out at the hearing, a complete pressure survey was made during the past summer, and the results placed upon a map. From this, studies were made to determine the necessity for reinforcement. Two general plans have been developed by the engineer representing the water company, Mr. Nicholas S. Hill, Jr. One of these involves an expenditure of \$1,600,000; the other an expenditure of \$1,700,000. In the first plan, available pressures in all the territory now served would be increased, but this first plan involves the installation of several booster pumping stations which would increase the operating cost. Under the second plan the cost of operation is actually reduced and the reinforcements to the system would also serve some portions of territory not now provided with service, and, under all the circumstances, it would appear that the second plan, even though at a slight additional expense, is the preferable one. This plan involves:

1. The construction of a reservoir at Alpine.
2. The construction of a large transmission main from Alpine southward along the ridge as far south as the No. 3 reservoir at Fairview.
3. The construction of a large transmission main from the New Milford pumping station eastward to the transmission main first referred to.
4. The construction of a new transmission main from New Milford southward to Rutherford.
5. The construction of an additional transmission main from New Milford, generally southeast, as far as Ridgely.
6. The installation at New Milford of additional pumps designed to deliver water into the Alpine reservoir through the transmission mains referred to under No. 1 and No. 2.

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The company has recognized the necessity for carrying out the plans referred to and the construction of a transmission main from New Milford to Rutherford has been completed as far as Essex Street, Hackensack, and will be completed to Rutherford some time in the early spring of 1917. The real estate for the location of the Alpine reservoir has already been purchased and contracts are in preparation for the new pumps and transmission lines to and from Alpine. The transmission line referred to under No. 5 is not to be constructed until the other lines have been installed and are in use. In addition to the above list of large items, it is intended to connect up a great many dead ends, thus increasing the effective transmission capacity of the distribution system as a whole. Between five and six hundred thousand dollars of the amount referred to above will be needed for this portion of the work alone.

The general result of the installation of the new transmission lines and of the connecting up of dead ends will be to materially increase the available pressures in all of the territory served by the company. This will be further referred to under the following heading. In the testimony submitted by Superintendent French, of the water company, it was stated that a small percentage of the individual customers are so located as to present special problems with regard to obtaining service. These individual customers must be dealt with by the company in such a way as to enable the customers to obtain satisfactory service, and the Board will, upon individual complaint, investigate and issue such appropriate order as the circumstances in each case will justify. The Board will be glad to have its attention called to the particular individuals receiving inadequate service, and will require the company to file a list of all such customers known to the company, with full information as to the conditions under which service was originally established. Where it appears that certain customers now receiving inadequate pressure could have been connected to the higher pressure service without excessive cost, the company should not have allowed these customers a choice in this matter. The primary duty of the company is to furnish safe, adequate and proper service. The duty of the company that follows is to make charges for such service without undue

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or unjust discrimination. In view of these statements it is now the duty of the company to change the connection of customers, so located, without charging the customer for the cost of the change and to hereafter make such charges against these customers as apply to the class of service furnished.

PRESSURE FOR FIRE PROTECTION.

From the beginning of the hearing the representatives of the municipalities have insisted that proper fire protection must be provided, both by providing for sufficient quantities of water, and delivery under adequate pressures. After consideration of the testimony and a study of these matters by the Board's engineer, Dr. Philander Betts, aided by conference with the engineers representing the company, the municipalities and the underwriters, tables have been prepared classifying the municipalities with reference to the fire risks and giving the quantities of water which, in our opinion, should be provided in the various municipalities, both in the business sections, and in the residential portions. The tables also show the pressures which should be maintained in the various municipalities. The improvements and extensions referred to will result in providing the quantities of water called for in the various municipalities and delivery of such water at the pressures necessary for proper fire protection in so far as pressure in the mains is concerned. Complete schedule showing the quantities of water required in each municipality and the pressure which must be maintained while this amount of water is being used is found in Appendix A; and an order will be entered requiring the company to extend and reconstruct its system so as to provide the quantities and pressures reasonably demanded by the municipalities for proper fire protection.

From the description of the company's system heretofore given, it will be noted that service in a large portion of the territory is dependent upon the direct pressure from the New Milford pumping station, and if that pumping plant should be completely disabled service in the area referred to would be interrupted. A

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complete breakdown is dependent upon a number of elements. There is a sufficient number of boilers and pumping units so that no interruption is likely to occur because of troubles to any one of these units. The boiler house is a building independent of the engine house. The main floor of the engine room is not fireproof, however, and at the earliest opportunity all combustible material connected with this floor should be replaced with noncombustible material. All wooden closets or lockers should be removed from the engine or boiler rooms. Automatic non-return valves should be installed on the main outlets from the boilers wherever valves of this type are not now in place.

Examination of the maps submitted in this case and of the testimony shows that the spacing of hydrants is altogether too great to make possible any proper measure of fire protection. The number of hydrants must be very materially increased in the different municipalities and Appendix B of this report gives the number of hydrants which should be installed in order that the respective municipalities may have proper fire protection. Upon application of the municipalities the company will be required to install the number of hydrants called for in Appendix B, which are necessary to furnish the fire protection demanded by the municipalities.

The ordinary fire stream is supposed to deliver from 200 to 250 gallons per minute with a $1\frac{1}{8}$ -inch smooth nozzle. With this amount of water flowing, the loss in pressure due to passing through the standard $2\frac{1}{2}$ -inch hose is twelve or thirteen pounds per 100 feet. Forty pounds at the nozzle of a hose is sufficient, under ordinary conditions, to deliver the normal quantity of water referred to. For every 100 feet of hose beyond this, there must be an additional twelve or thirteen pounds pressure at the hydrant.

To require the water company to furnish such pressures in the mains as would make possible satisfactory fire service with hydrants from 700 or 800 to 1,500 feet apart, would entail such extravagant costs of operation and excessive investment for pipes and pumps as to make necessary very much larger rates than are now customary. Testimony submitted shows that the hydrants in most of the municipalities are separated so widely that, in case

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of a fire requiring a large quantity of water, it would not be possible to get this water upon any one fire without using excessively long lengths of hose, and under no circumstances could a sufficient number of adequate streams be provided with the present spacing of hydrants. The total number of hydrants, properly spaced, would be nearly twice as many as are now found in the territory supplied. All hydrant branches must be provided with gate valves. In all areas which depend upon engine service, hydrants must be provided with steamer connections and in all the more important mercantile and manufacturing districts hydrants must be so constructed. All hydrants installed in the future shall have a barrel not less than six inches in diameter and connections not less than six inches. Whenever in the future it becomes necessary to extensively repair or replace a 4-inch hydrant, the new hydrant and its connections shall be not less than six inches in size. In all new extensions of the distribution system, in the important mercantile districts, gate valves should be installed not more than 500 feet apart; and in residential sections not more than 800 feet apart.

The quantities and pressures called for in Table "A" are in addition to the average use of water and, in view of the variation in the hourly and daily use of water for ordinary purposes, the quantities and pressures called for in Appendix "A" are to be considered as approximate.

In ascertaining whether the requirements as to quantity and pressure are reasonably observed, tests shall be made in accordance with accepted methods. In making the tests a sufficient number of hydrants shall be combined in groups to give the fire flow which is required. The hydrants selected to be used in one group shall be concentrated as nearly as may be about a single point. The amount of water to be drawn from a single hydrant during the test shall be 500 gallons per minute for systems under direct pressure and 600 gallons per minute for systems under engine service.

The matter of rates for fire protection will not be referred to in this case, but will be considered in connection with the investigation of rates.

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QUANTITIES OF WATER AVAILABLE.

When the investigation of this matter was first inaugurated, the attorney for Bergen County municipalities asked the Board to investigate the resources of the company, as there was a feeling that the company was trying to serve too large a territory with facilities that were too limited. This impression evidently arose from the insufficient pressures available in different parts of the territory, and because of the insufficient pressure it was assumed that this was due to a lack of sufficient water, when, as a matter of fact, it was due to the application of insufficient pressure at the pumping plant and to losses in the transmission and distribution lines. Testimony was submitted in the form of an exhibit marked "Exhibit A." This was a report made by Mr. Nicholas S. Hill, Jr., to the Hackensack Water Company, under date of June 30th, 1914. This report contains a description of the system owned and operated by the water company and an analysis of the available water resources of the watershed from which the company gets its water.

The system of the Hackensack Water Company involves, first, the impounding of surface water in the valley of the Hackensack river and the Pascack creek. The Woodcliff reservoir is nothing more nor less than an enlargement of the Pascack creek. It has, however, a storage capacity of 889,000,000 gallons. The Oradell reservoir has already been referred to and when completed will have a capacity of 7,000,000,000 gallons. Water flows by gravity through the bed of the river and canals which have been constructed by the company to the New Milford plant. On entrance to the New Milford plant, coagulating material is added to the water and it is then pumped with low level pumps into the sedimentation basin. At the further end of the sedimentation basin, the water flows by gravity through the filters into a clear water well which is also the suction well for the pressure pumps. The filter plant, which was enlarged about two years ago, now has a filtering capacity of 36,000,000 gallons per day and the building is capable of housing filters with a capacity of 48,000,000 gallons per day. It should be noted that the maximum daily output

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so far is not over 30,000,000 gallons and the average for the year is about 27,000,000 gallons.

The pumping station includes:

- One 10 M. G. D. Worthington high duty engine.
- One 12 M. G. D. Allis-Chalmers vertical triple expansion engine.
- One 18 M. G. D. Allis-Chalmers vertical triple expansion engine.
- One 20 M. G. D. Allis-Chalmers vertical triple engine.

At Englewood a secondary pumping plant takes water from the transmission mains and delivers it into a system on the upper levels of Englewood. At New Durham another secondary pumping plant takes water from the mains and delivers it through two separate sets of pumps to two different higher levels. In addition to this, a motor driven pump takes water from the highest level and pumps it into the southern end of the Englewood high level system.

Drainage Area.—The watershed of the Hackensack river above the head of tidewater at New Milford includes about 114.8 square miles. A steadily increasing suburban population is distributed in a number of small villages throughout the watershed. This increase, however, is not sufficiently rapid to be a menace to the filters or the quality of the filtered water, particularly as the State regulations become more and more exacting. This shed is heavily covered with drift sand and gravel, especially in the flatter portions of the valley. There is much flat and some marshy land in the stream, particularly in the lower region, and it is this flat area that is being dredged out for reservoir purposes. The general elevation of the watershed ranges from zero to 400 feet and averages about 200 feet. It has a reputation of having a well sustained dry weather flow.

The Hackensack river, above the present intake, has an approximate area of 114 square miles. At the present time there is one completed reservoir, referred to above as the Woodcliff reservoir, and the Oradell reservoir, which is at least more than half completed. Its capacity, January 1st, 1914, was about 327,000,000 gallons. Its capacity at the present time is more than three times this and it will not be completed until about 1921. With regard to the sufficiency of the watershed for a reasonable period, Mr.

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Hill analyzed certain available data gathered by the State Geological Survey and made comparisons with other streams in northern New Jersey. These studies indicate that the run-off of the Hackensack will be less variable than some other streams and that the average yield will be about 15 per cent. greater than that of the Croton river. The Croton figures have been used as a basis for an estimate for the reason that accurate run-off records have been maintained consecutively for a period of about forty-seven years, and it will be conservative to use these figures with an added allowance of 15 per cent. to determine the probable safe yield of the Hackensack. The total storage developed January 1st, 1914, including the Woodcliff reservoir, amounted to 1,215,700,000 gallons of storage which, on Croton figures and with the percentaged allowance for the difference between Croton and Hackensack, will yield about 22,000,000 gallons per day.

As the daily average total water pumped from the Hackensack river in 1913 was 27,652,000 gallons, it is evident that the water company is thoroughly justified in the purchase of the land requisite for the extension of their storage, and that the construction of the Oradell reservoir is warranted in the premises. If the Oradell reservoir were enlarged to elevation 20 feet a.m.h.t. there would be 5,000,000,000 gallons of storage on the Hackensack which would yield about 45,000,000 gallons per day and if this reservoir should be enlarged to its maximum, the total storage would equal 7,389,000,000 gallons and the yield would be about 50,000,000 gallons daily. At the present time the storage development on the Croton amounts to about 277,000,000 gallons for each square mile of tributary watershed and the average on the Cochituate, Sudbury and Wachusett, which supply Boston, is about 381,000,000 gallons per square mile. The development of storage of the Hackensack, January 1st, 1914, amounted to only 10,000,000 gallons per square mile. From this it is estimated that the development of storage on this stream for the purpose of obtaining additional water supply has hardly been inaugurated. With a development of the storage on the Hackensack equivalent to that on the Croton, this stream will yield about 700,000,000 gallons of water per day. Whether or not the Hackensack contains a sufficient number of available reservoir sites to enable as

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full a development as exists on the Croton, has not been carefully studied, but it is evident that the amount of water available is in excess of the requirements of the communities now served for many years to come. The above statement establishes that so far as quantity of water is concerned, there is an ample supply of water in the Hackensack watershed for the needs of the people served by the company for at least twenty-five, and perhaps thirty-five years.

EXTENSIONS OF MAINS.

Where applicants for water service are located along the lines of mains, or where an extension to serve them is less than 100 feet in length, the Hackensack Water Company will make the necessary extension of main without any guarantee other than the regular contract for service, which involves a minimum charge of \$2.50 per quarter. This is equivalent to a guarantee of ten cents per annum per running foot of main.

Where the prospective customer is so located that an extension in excess of 100 feet is involved, it is customary for the company to require the prospective customer or group of customers, if that be the case, to deposit with the company at the beginning of each year a sum of money equal to ten cents per running foot for each foot of the extension, this being a guaranteed minimum revenue and payable until such time as additional customers were connected to the same length of main, in which case, the revenue received from these other customers would be credited toward the guarantee made by the customer who contracted for the original extension. In time, if sufficient new customers were added to the extension referred to, the guarantee would be wiped out and customers would be required to pay no more than the ordinary minimum charge for water. The above rule appears to be equitable for ordinary extensions. It is not quite sufficient to provide a proper revenue upon the entire cost of the extension but it appears to have been sufficiently reasonable in the minds of many local authorities so that it is found in a great many municipal ordinances granting franchises to water companies.

Complaint has arisen with reference to the application of this

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rule on the part of some prospective customers who believe that the extensions ought always to be made without any guarantee. Certainly, the main streets of the built up portions of a municipality ought to be provided with mains of adequate size. The extensions of these streets beyond the well built up portions should also be served by the franchise holding company as soon as they can be practicably provided for. Extensions into territory beyond that which is fairly well built up can only be made under ordinary conditions when they are at least self supporting. Otherwise the burden of carrying unprofitable investments would have to be in the long run transferred to the customers living in the built up portions of the community. It therefore follows that it is not unreasonable on the part of a water company to require as a prerequisite to the making of an extension an assurance of a reasonable revenue therefrom.

A number of complaints have arisen because of the failure to credit to the account of a given customer revenue received from customers supplied from sections of main which have been further extensions of mains, a revenue on which had been assured by the other customer. A complaint was made to the Board where a customer assured a revenue of \$20 per annum for an extension of 200 feet. No other customer was connected directly to this 200 feet, but a further extension was made for another distance of 100 feet in connection with which the customer agreed to pay the ordinary minimum of \$10 which was also equivalent to ten cents per running foot. In this case the first customer who was paying the \$20 minimum received no credit in connection with the further extension. It would seem, offhand, that the entire guarantee of \$30 ought to be divided equally between the two customers, but in considering this matter the company submitted to the Board data concerning a number of such additions which were very complicated, one extension being made after another with varying distances, some longer and some shorter than the original extension. To average the guarantee where the further extension is greater than the first extension made would result in increasing the guarantee of the customer who first had the pipe extended and it seemed best not to interfere with the present plan under which the company makes its extensions. Under all the

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circumstances, the Board will not make any general rules which will conflict with those now observed by the Hackensack Water Company in connection with extensions, but will deal with each specific case upon its own merits.

CONCLUSIONS.

An order will be entered requiring the Hackensack Water Company:

1. To make such additions and extensions to its pumping plant, its transmission system and its distribution mains as will result in the increase of pressures to the general limits referred to in Appendix A.

2. To install upon application therefor by municipalities the necessary hydrants in the various municipalities in accordance with the schedules given in Exhibit B in order that the lengths of hose necessary in extinguishing fires shall not be excessive.

3. To modify its rule requiring a deposit of \$10 to guarantee payment of repairs to a meter damaged by freezing so as to provide for a deposit of a sum not exceeding \$5 for the ordinary house type of meter. (With regard to the large meters used in supplying water to commercial establishments, such deposits are rarely necessary, but if required, may be adjusted to properly protect the company against loss.)

- 4a. To reconstruct of noncombustible material the floor in the main pumping station at New Milford.

- b. To remove all wooden closets or lockers from the engine and boiler rooms.

- c. To install automatic non-return valves on all boilers not now so equipped.

5. To file with the Board:

- a. A list of all individual customers and locations where pressures are insufficient to provide continuous service to all the fixtures in the buildings, together with a statement of the circumstances under which service was established in each case.

- b. A list of all localities where the pressures and quantities available for fire purposes fall measurably short of the requirements set out in Appendix A of this report.

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c. As changes are made, resulting in improvement in the conditions of service, information with regard to such changes.

Dated April 28th, 1917.

APPENDIX A.

The following classification of municipal divisions has been made up after study of all the testimony submitted in this case and after a careful study of the maps showing the distribution system and the elevation above sea level of the various divisions. The quantities of water given in these tables are those probably required for fire purposes in the business sections or the sections of the greatest fire hazard. These quantities are in addition to the average maximum quantity of water required for all other uses, the average maximum being taken as the average of the maximum daily consumption of water. The pressures given are the pressures as measured at the hydrants in use with the full quantity of water being drawn from a group of hydrants available for concentration of the water on a single fire. It is to be assumed that the hydrant spacing is an adequate one and in general meets with the conditions required by the insurance experts.

In some outlying locations which are thinly built, where buildings are low and where the requirements as specified would require the company to make expenditures for pipe, extensions and connections not justified by the revenue to be obtained, a lessened amount of water at a somewhat lower pressure may be accepted until such time as the section is developed sufficiently to justify an adequate gridiron of mains.

CLASSIFICATION OF CIVIL DIVISIONS.

Class A.—Towns with Low or Moderate Fire Risks for Their Size and Population, with Buildings Reasonably Separated.

Division 1.—Population 1,600 and under—1,000 gallons per minute at the centre of distribution, 500 gallons per minute in the residential section:

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Cresskill, Delford, Demarest, Emerson, Englewood Cliffs, Harrington Park, Haworth, Hillsdale, Lodi, Maywood, Moonachie, Norwood, Palisade Township, Riverside, Wallington, Woodridge.

The above places are little more than villages, none of which has a population which would probably be large enough to support an independent water works sufficient in capacity to furnish adequate fire service. The buildings are well separated. There are practically no fire hazards. The business sections are not congested. Values are low. The provisions made above are equivalent to four fire streams at points of greatest hazard and two fire streams in the residential sections.

Division 2.—Population 1,200 to 3,300—1,000 gallons per minute at the centre of distribution, 500 gallons per minute in the residential section:

Bergenfield, Bogota, Dumont, Hasbrouck Heights, Ridgefield, Teaneck.

These communities are practically residential in character throughout. The business sections are well defined, but small, and contain no serious hazards even for villages of their size. What special fire hazards exist are small and isolated. The dwellings are well segregated in most of these places. The fire flow should be approximately as found in Division 1.

Division 3.—Population 1,700 to 5,000—1,500 gallons per minute at the centre of distribution, 500-1,000 gallons per minute in the residential section:

Closter, Fairview, Leonia, Little Ferry, Palisade Park, Secaucus, Tenafly, Westwood.

These are fair-sized villages, having business sections which are slightly congested, and have appreciable but relatively small fire risks. Factories, lumber yards, etc., are more numerous, but being isolated do not constitute a very great hazard, as local fire protection devices could be installed in conjunction with the water

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system. The dwellings are on the whole scattered, although in some sections they are built in rows. The fire flow allowances have been raised to six streams for the congested value sections and to four streams for residential sections in which the dwellings are close rather than segregated.

Division 4.—Population 4,000 to 7,000—2,000 gallons per minute at the centre of distribution, 500-1,000 gallons per minute in the residential section:

Carlstadt, Cliffside Park, Fort Lee, Ridgely Park.

This division includes boroughs that in size are small towns. They contain relatively important mercantile districts in which are located stores, hotels, halls and small industrial establishments which go to make up fire hazards of appreciable value. In addition, they have some factory, lumber and moving picture plants. Dwellings are somewhat closely built, except in the outskirts. The fire flow allowance for these places has to be increased to eight streams for the congested value district.

Division 5.—Population 6,000 to 20,000—2,500 gallons per minute at the centre of distribution, 1,000 gallons per minute in the residential section:

East Rutherford and Rutherford, Englewood, Hackensack.

The towns of Englewood and Hackensack and the boroughs of East Rutherford and Rutherford (combined) are included in this division. The business sections of these towns are more city-like in character, containing more or less congested blocks of stores, hotels, etc., having a correspondingly higher hazard. Factories and other industrial establishments constitute very appreciable hazards at local points. The dwellings are closely built over a large portion of the residential area. The fire flow allowances are equivalent to ten streams at the congested value points and four streams over most of the residential area.

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Class B.—Towns with Conspicuous Fire Hazards or with Congested Business or Tenement Districts.

Division 1.—Population 1,600 and under—1,000 gallons per minute at the centre of distribution, 500 gallons per minute in the residential section:

None.

Division 2.—Population 1,200 to 3,300—1,000 gallons per minute at the centre of distribution, 500 gallons per minute in the residential section:

None.

Division 3.—Population 1,700 to 5,000—4,000 gallons per minute at the centre of distribution, 500 gallons per minute in the residential section:

Edgewater.

Edgewater is a borough which, while having a comparatively small population, has in it numerous very large manufacturing establishments, which constitute a fire hazard out of all proportion to the population of the borough. The fire department is the best equipped in Bergen county and at times of serious fire has been assisted by the fire boats of New York City. The fire flow allowance for this borough is equivalent to sixteen fire streams in the industrial section and two fire streams in the residential section.

Division 4.—Population 4,000 to 7,000—2,000 gallons per minute at the centre of distribution, 500-1,000 gallons per minute in the residential section:

None.

Division 5.—Population 6,000 to 20,000—3,000 gallons per minute at the centre of distribution, 1,500 gallons per minute in the residential section:

Guttenberg, North Bergen.

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The town of Guttenberg and that part of North Bergen in the Weehawken high service district are closely built up, being almost city-like in character. The business sections consist of solid blocks of two to three-story stores, apartments, industrial establishments, etc., some frame, some of brick. Factory and similar hazards are also located in these towns. The residential areas are rather completely built up and contain a large number of apartment houses. The allowance for fire flow has been fixed at about twelve streams for the congested value sections and six streams for the residential sections.

Division 6.—Population 13,000 to 39,000—4,000 gallons per minute at the centre of distribution, 1,500 gallons per minute in the residential section:

Union, Weehawken, West Hoboken, West New York.

This division includes all the large towns in the Weehawken high service district, all of which are small cities in structural conditions and hazards. The business sections are very congested, with many of the buildings three or four stories high. Industrial fire hazards are very pronounced. The residential sections contain compactly built dwellings and tenements. The fire flow allowed is equivalent to sixteen fire streams at the point of congested value and six streams for the residential sections.

PRESSURE REQUIREMENTS.

The first and most obvious distinction in deciding upon the pressure requirements is between fire engine service and direct service in which fire pressures are furnished at the hydrant. Where fire engines are used, twenty pounds at the hydrant are amply sufficient for all purposes. In direct pressure systems the pressure should range from fifty to seventy-five pounds at the hydrant. Whenever the cost of furnishing the additional pressure for direct service is in excess of the cost of maintaining auxiliary fire apparatus, it is obviously economical to provide fire engine service, and water works, whether municipal or private, should

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only be required to furnish sufficient pressure for fire engine service. It is also true where a number of communities are served from a common source and the difference in elevation between them is very great, that the total cost of fire service for all will be less if the communities at the higher elevations maintain fire engines rather than to require communities at the lower elevations to pay the added cost of higher pressures which are not required by them.

Owing to the topography of the territory supplied by the Hackensack Water Company and the high elevations to which water must be pumped, the economic interests of the majority of the communities served make it expedient to require the minority to maintain fire engines. It has been assumed that those communities which now use fire engine service will continue to do so and that those communities in which fire engines are economically desirable, because of their location or elevation, will supply them.

In the upper levels of Carlstadt, Woodridge and East Rutherford, there shall be maintained a pressure which shall not fall below twenty pounds per square inch.

In the upper levels of Hasbrouck Heights, there shall be maintained a pressure which shall not fall below thirty pounds per square inch.

In the lower levels of Carlstadt, Woodridge, Hasbrouck Heights and East Rutherford, the minimum pressure shall be sixty pounds per square inch.

In the upper levels of Guttenberg, Union, Weehawken, West New York and West Hoboken, and in those portions of Cliffside Park, Fairview and North Bergen which are supplied from the Weehawken high service system, the pressures at no point shall be less than twenty pounds per square inch.

In all other municipalities the minimum pressure shall be sixty pounds per square inch.

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APPENDIX B.

Municipality.	Present.		Proposed.	
	Number of Hydrants.	Average Spacing.	Required No. of Hydrants.	Average Spacing.
<i>Hudson County:</i>				
Guttenberg	50	500	50	500 ft. apart
Hoboken	18	....	....	....
North Bergen	215	715	307	"
Secaucus	49	1,000	99	"
Town of Union	123	600	149	"
Weehawken	121	570	138	"
West Hoboken	210	621	263	"
West New York	164	619	203	"
Total, Hudson Co.	950	636	1,209	500 ft. apart
<i>Bergen County:</i>				
Bergenfield	38	1,105	84	500 ft. apart
Bogota	14	929	26	"
Carlstadt	39	1,731	135	"
Cliffside Park	60	992	119	"
Closter	54	731	79	"
Cresskill	38	671	51	"
Delford	40	1,100	88	"
Demarest	28	807	45	"
Dumont	32	1,156	74	"
East Rutherford	71	683	97	"
Edgewater	70	544	76	"
Emerson	18	777	28	"
Englewood	172	1,009	347	"
Englewood Cliffs	12	1,958	47	"
Fairview	37	946	70	"
Fort Lee	62	1,258	156	"
Hackensack	255	808	412	"
Harrington Park	31	677	42	"
Hasbrouck Heights	53	896	95	"
Haworth	25	1,140	57	"
Hillsdale	40	700	56	"
Leonias	41	1,085	89	"
Little Ferry	41	585	48	"
Lodi	2	1,000	4	"
Maywood	41	707	58	"
Moonachie	13	731	19	"
Norwood	38	526	40	"

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APPENDIX B—*Continued.*

Municipality.	Present.		Proposed.	
	Number of Hydrants.	Average Spacing.	Required No. of Hydrants.	Average Spacing.
<i>Bergen County (Cont'd):</i>				
Palisade Park	34	926	63	500 ft. apart
Palisade Township	20	1,100	44	"
Ridgefield	41	646	53	"
Ridgefield Park	87	943	164	"
Riverside	18	1,361	49	"
Rutherford	100	1,225	245	"
Teaneck	54	1,194	129	"
Tenafly	74	838	124	"
Wallington	2	3,250	13	"
Westwood	60	867	104	"
Woodridge	17	1,676	57	"
Total, Bergen Co.....	1,872	931	3,487	500 ft. apart
Grand Total	2,822	832	4,696	500 ft. apart

ORDER.

The Board of Public Utility Commissioners, having on the 28th day of April, 1917, filed a report in the above matter, which report together with appendices A and B thereof is hereby attached and by reference thereto herein, is made part hereof, the Board

Hereby finds and determines that the Hackensack Water Company does not furnish adequate and proper service and hereby orders and directs the Hackensack Water Company to make such additions and extensions to its pumping plant, its transmission system and its distribution mains as will result in said company being ready at all times to supply water for fire purposes in addition to that required to meet the maximum daily consumption for all other uses, in quantities and under pressure as follows:

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One thousand gallons per minute at the centre of distribution and 500 gallons per minute in the residential sections of

Cresskill	Norwood
Delford	Palisade Township
Demarest	Riverside
Emerson	Wallington
Englewood Cliffs	Woodridge
Harrington Park	Bergenfield
Haworth	Bogota
Hillsdale	Dumont
Lodi	Hasbrouck Heights
Maywood	Ridgefield
Moonachie	Teaneck

One thousand five hundred gallons per minute at the centre of distribution and 500 to 1,000 gallons per minute in the residential sections of

Closter	Palisade Park
Fairview	Secaucus
Leonia	Tenafly
Little Ferry	Westwood

Two thousand gallons per minute at the centre of distribution and 500 to 1,000 gallons per minute in the residential sections of

Carlstadt	Fort Lee
Cliffside Park	Ridgefield Park

Two thousand five hundred gallons per minute at the centre of distribution and 1,000 gallons per minute in the residential sections of

East Rutherford and Rutherford	Englewood Hackensack
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Four thousand gallons per minute at the centre of distribution and 500 gallons per minute in the residential section of

Edgewater

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Three thousand gallons per minute at the centre of distribution and 1,500 gallons per minute in the residential sections of

Guttenberg

North Bergen

Four thousand gallons per minute at the centre of distribution and 1,500 gallons per minute in the residential sections of

Union
Weehawken

West Hoboken
West New York

In the upper levels of Carlstadt, Woodridge and East Rutherford, there shall be maintained a pressure which shall not fall below 20 pounds per square inch.

In the upper levels of Hasbrouck Heights, there shall be maintained a pressure which shall not fall below 30 pounds per square inch.

In the lower levels of Carlstadt, Woodridge, Hasbrouck Heights and East Rutherford, the minimum pressure shall be 60 pounds per square inch.

In the upper levels of Guttenberg, Union, Weehawken, West New York and West Hoboken, and in those portions of Cliffside Park, Fairview and North Bergen, which are supplied from the Weehawken high service system, the pressures at no point shall be less than 20 pounds per square inch.

In all other municipalities the minimum pressure shall be 60 pounds per square inch.

The pressures given are pressures as measured at the hydrants in use, with the full quantity of water being drawn from a group of hydrants available for concentration of the water on a single fire, with an adequate hydrant spacing.

The Board further *orders and directs* the Hackensack Water Company to do and perform the following:

1. To install upon application therefor by municipalities hydrants as follows:

Investigation of Service Afforded by Hackensack Water Company.

<i>In Hudson County.</i>		Fort Lee	156
Guttenberg	50	Hackensack	412
Hoboken .....	...	Harrington Park	42
North Bergen	307	Hasbrouck Heights	95
Secaucus	99	Haworth	57
Town of Union	149	Hillsdale	56
Weehawken	138	Leonia	89
West Hoboken	263	Little Ferry	48
West New York	203	Lodi	4
Total Hudson County....		Maywood	58
		Moonachie	19
		Norwood	40
<i>In Bergen County.</i>		Palisade Park	63
Bergenfield	84	Palisade Township	44
Bogota	26	Ridgefield	53
Carlstadt	135	Ridgefield Park	164
Cliffside Park	119	Riverside	49
Closter	79	Rutherford	245
Cresskill	51	Teaneck	129
Delford	88	Tenafly	124
Demarest	45	Wallington	13
Dumont	74	Westwood	104
East Rutherford	97	Woodridge	57
Edgewater	76	Total Bergen County....	
Emerson	28		
Englewood	347		
Englewood Cliffs	47	Grand Total	
Fairview	70		

2. To modify its rule requiring a deposit of \$10.00 to guarantee payment of repairs to a meter damaged by freezing so as to provide for a deposit of a sum not exceeding \$5.00 for the ordinary house type of meter.

3. (a) To reconstruct of noncombustible material the floor in the main pumping station at New Milford.

(b) To remove all wooden closets or lockers from the engine and boiler rooms.

(c) To install automatic nonreturn valves on all boilers not now so equipped.

4. To file with the Board:

(a) A list of all individual customers and locations where pressures are insufficient to provide continuous service to all the fixtures in the buildings, together with a statement of the circumstances under which service was established in each case.

Schedule of Rates—Hackensack Water Co.

(b) A list of all localities where the pressures and quantities available for fire purposes fall measurably short of the requirements set forth herein.

(c) As changes are made, resulting in improvements in the conditions of service, information with regard to such changes.

This order shall become effective June 9th, 1917.

Dated May 16th, 1917.

No. 427.

IN THE MATTER OF HEARING AS TO WHETHER THE EXISTING
SCHEDULE OF RATES OF THE HACKENSACK WATER COM-
PANY IS JUST AND REASONABLE.

ABSTRACT OF THE REPORT.

CONFERENCE ON VALUATION.

The Board authorized the holding of a conference between engineers representing the Board, the municipalities served by the company and the company. The engineers recommended to the Board for adoption a valuation of physical property, exclusive of land of \$8,676,089. Accrued depreciation was placed at \$897,975, and working capital at \$200,000. These figures were accepted after checking by the Board. The value of land is placed at \$996,200, and the total depreciated value of tangible property at \$9,028,059.

RATE BASE FIXED.

The Board holds that in the valuation of a public utility for rate-making purposes, equitable treatment requires an allowance for certain elements of intangible cost in addition to the values of the physical property.

It appears that extensive additions and improvements essential to the service are being made.

A rate base of \$9,500,000 is adopted as fair under all the circumstances to the company and its customers.

SUM REQUIRED FOR RETURN.

The sum of \$1,125,000 is accepted as affording a return of 7 per cent. on the base with reasonable allowances for depreciation and operating expenses.

The gross revenue bearing water consumption is taken as 915,910,000 cubic feet per year. The revenue is allocated to different service districts, as is also the cost of service, including water for fire service.

Schedule of Rates—Hackensack Water Co.

DISTINCTION BETWEEN COSTS OF SERVICE.

The Board holds that the cost of water for fire service should be met by charges based on the proportion of plant and system required for fire protection, exclusive of hydrants, and an additional charge for each hydrant.

The costs for domestic, industrial and public consumers should be met by (1) a fixed service charge, payable whether water is used or not, and (2) a charge covering proportional or variable costs apportioned on the basis of the quantity of water consumed. Fire service charges and fixed service charges for domestic, industrial and public consumers may be taken as uniform in all districts throughout the entire system.

The present schedule of rates of the Hackensack Water Company is found to be inequitable, since the charges for fire service are but a fraction of what the service costs the company and domestic consumers are now carrying the burden which should be borne by the taxpayers as such.

RATES DISCRIMINATORY AGAINST DOMESTIC CONSUMERS.

The Board finds that the company's existing schedule of rates is unjust and unreasonable and unduly discriminatory against the ordinary domestic consumers and unduly favorable to large wholesale consumers and with regard to charges for fire protection.

RATES FOR OTHER THAN FIRE SERVICE.

The Board fixes just and reasonable rates to be charged for domestic, commercial and manufacturing purposes. These rates consist of two parts or elements—(1) a fixed charge, and (2) a proportional charge. The fixed charge is based upon the size of the meter required to furnish the service for the given property and is uniform throughout the territory served by the company. A sliding scale of rates is fixed in addition to the fixed charge. This scale varies in different districts served and with different quantities supplied.

RATES FOR FIRE SERVICE.

The rate for fire protection service is made up of a fixed charge and hydrant charge. The fixed charge varies with the sizes of distribution mains. The hydrant charge is \$6 per annum for each hydrant.

EFFECT OF NEW SCHEDULE.

Based upon business done in 1913 and 1914, the effect of the new schedule will be to reduce the gross amount collected annually from ordinary residence and commercial consumers about \$200,000. The amount charged for fire service will be increased from approximately \$35,500 to \$138,625.

Appearances:

For the Hackensack Water Company—

W. M. Wherry, H. L. Deforest, George Holmes, F. G. Mygatt.

For Crasskill, Demarest, Edgewater and Tenaflly—

W. J. Wright.

For Leonia, Fort Lee, Englewood Cliffs, Palisade Park, Norwood, Palisade Township and Bergen County Board of Freeholders—

William M. Seufert.

Schedule of Rates—Hackensack Water Co.

For Carlstadt—
 Otto J. Strasser, Fred Reif.
For Englewood—
 Albert I. Drayton.
For City Club, Englewood—
 E. M. Platt.
For Ridgefield—
 S. G. H. Wright.
For the Town of Union and Weehawken—
 E. Walscheid, Adolph H. Peter, William C. Asper.
For Hasbrouck Heights—
 E. E. Fields.
For Cliffside—
 A. M. Agnew.
For North Bergen Township—
 Francis H. McCauley.
For the City of Hoboken—
 John J. Fallon.
For Citizens of Hudson County—
 Harry Kuhlke.

HISTORY OF THE CASE.

On June 15th, 1914, the Board of Public Utility Commissioners adopted a resolution calling a hearing as to whether the existing schedule of rates of the Hackensack Water Company (see Appendix A) is just and reasonable. This followed the filing of a joint complaint signed by Harry Kuhlke, a member of the Assembly from Hudson county, and seven municipalities in Hudson county served by the company, the complaint challenging the reasonableness of the rates in their application to these municipalities. In view of the fact that the Hackensack Water Company serves fifty-one municipalities, it was decided by the Board to initiate, on its own motion, a general investigation of the company's rates and service. Investigation of the service has been made independently of the investigation of the rates, but the rates finally adopted in this report are based upon the furnishing by the company of safe, proper and adequate service.

The municipalities in Bergen county served by the company while originally complainants as to the company's service evinced from the beginning an active interest in the rate as well as the service proceedings, and their representative, William M. Seufert, assumed the greater part of the task of representing the public in

Schedule of Rates—Hackensack Water Co.

both proceedings. The first hearing in the matter was held July 2d, 1914, and was continued from time to time until July 7th, 1916, the hearing involving a large number of sessions.

The case went to conference on July 7th, 1916, but later Weehawken Township, represented by William C. Asper, asked that a further opportunity be given the township to present additional testimony concerning costs and charges for fire protection. This request was based upon the fact that Weehawken Township was now represented by a new counsel who had not had opportunity to go into the matter. The hearing was continued on September 27th and on October 11th, 1916.

At the hearing on July 2d, 1914, a report was submitted by the Board's engineer, giving a detailed statement of the information which would be necessary in the investigation of the rates of the company. Based upon this report, the Board asked the company to submit a detailed inventory and appraisal, full information concerning the various issues of capitalization from the inception of the company, and full information concerning the earnings and expenses for a period of years. The hearing was then postponed to October 16th, 1914, to afford opportunity for the compilation of the necessary data, and on that date the company submitted a tentative and preliminary report and valuation of the property prepared by Nicholas S. Hill, Jr.

CORPORATE HISTORY.

The Hackensack Water Company was organized in 1869 by special act of the legislature (see Chap. LXXX., P. L. 1869), which empowered the company to provide for the construction, installation and operation of reservoirs, conduits, aqueducts, pipes, pumps and all other necessary devices necessary "for supplying the village of Hackensack and places adjacent thereto with water sufficient for extinguishing fires, culinary and other family purposes, watering the streets and such other purposes as may conduce to the health and comfort of the citizens; and it shall be lawful for the said president and directors, or others in their employ, to enter at all times upon all lands or water in the Township of New Barbadoes and Saddle River, Bergen County, * * *."

Schedule of Rates—Hackensack Water Co.

This act was amended by Chapter CCCLII., P. L. 1875, which empowered the company to carry on the business of water-supply "necessary for supplying all that part of Bergen County which lies east of the Hackensack river with water for domestic and such other uses as may conduce to the health and comfort of the citizens."

The Town of Union Aqueduct Company was organized October 22d, 1881, to supply the Town of Union, Hudson County.

The Township of Union Aqueduct Company was organized October 22d, 1881, to supply the Township of Union, Hudson County.

The Town of Guttenberg Aqueduct Company was organized October 22d, 1881, to supply the Town of Guttenberg.

The Township of Weehawken Aqueduct Company was organized October 22d, 1881, to supply the Township of Weehawken.

The Township of West Hoboken Aqueduct Company was organized October 22d, 1881, to supply the Township of West Hoboken, Hudson County.

The Township of North Bergen Aqueduct Company was organized October 22d, 1881, to supply the Township of North Bergen, Hudson County.

The Hackensack Water Company became insolvent on March 31st, 1879, and the property was sold at receiver's sale. Certificate of reorganization of the Hackensack Water Company was filed September 7th, 1880, in which the name was changed to "Hackensack Water Company, Reorganized." An amended certificate was filed September 18th, 1881. On October 28th, 1881, the "Hackensack Water Company, Reorganized," was consolidated with the Township of Union Aqueduct Company, Town of Union Aqueduct Company, the Township of Guttenberg Aqueduct Company, the Township of Weehawken Aqueduct Company, the Township of West Hoboken Aqueduct Company, the Township of North Bergen Aqueduct Company, forming the "Hackensack Water Company, Reorganized." On June 10th, 1902, certificate was filed changing the name of the "Hackensack Water Company, Reorganized," to Hackensack Water Company.

By ordinances of Rutherford and Boiling Springs, now East

Schedule of Rates--Hackensack Water Co.

Rutherford and Carlstadt, the "Hackensack Water Company, Reorganized," was authorized to operate either directly or by such companies as it might organize for the purpose in such territory.

The Rutherford Water Company was organized on June 19th, 1891.

The Boiling Springs Water Company was organized June 9th, 1900, for the purpose of supplying Boiling Springs.

These companies were organized to serve these communities under the grants to "Hackensack Water Company, Reorganized," before mentioned.

The Hackensack Water Company obtains its water from the Hackensack river and the Pascack creek and their tributaries. The watershed of these streams extends up into New York State a considerable distance above the New York-New Jersey boundary line. In order to protect and conserve the supply for the Hackensack Water Company, it obtained a controlling interest in the Spring Valley Water Works and Supply Company, having a plant at Spring Valley, one of the sources of the Hackensack Water Company. The Spring Valley company supplies not only Spring Valley, but Tappan, Sparkill and South Nyack.

FINANCIAL HISTORY.

The original Hackensack Water Company built a small pumping plant on the river bank at Cherry Hill, about two miles north of Hackensack. A reservoir was also built at Cherry Hill, on the top of the hill west of the river about one-eighth mile. From this reservoir a pipe line was extended to Hackensack and mains laid throughout the old village as it then existed. In the early 70's a change occurred in the management of the company, due to financial embarrassment of those then in control. There does not appear to have been much change in the plant from that time until the appointment of the receiver in 1879 and the sale by the receiver. The company, as reorganized in 1881, commenced business by issuing capital stock in the amount of \$300,000.

About 1880, the "Hackensack Water Company, Reorganized," negotiated a contract with the City of Hoboken for a supply to that city and commenced the construction of new works at the

Schedule of Rates—Hackensack Water Co.

New Milford dam, situated about six miles above Hackensack. The capitalization of the company was increased from time to time to provide for the extensions necessary to carry out its contract and to supply the territory lying between New Milford and Hoboken. Table I. shows in detail the amount of stock and of bonds outstanding each year, together with the proceeds obtained from each sale of securities, the rate of interest paid, and the actual cash cost of the property as constructed.

Table II. shows the gradual increase in the securities outstanding, and shows that the growth of the company has been very rapid, considering the fact that in 1881 the total capitalization was but \$300,000, and in 1917 it is approximately \$9,000,000, or thirty times as great.

Schedule of Rates—Hackensack Water Co.

TABLE I.
TABLE SHOWING ISSUES OF SECURITIES, THE CASH PROCEEDS AND THE PROCEEDS USED FOR DEVELOPMENT OF THE HACKENSACK.
WATER COMPANY PLANT.

Ref.	Year Ending	Premiums Received Interlined.			Bonds and Time Loans in 1913.			Total Cash Capital.	Deduct Net Advances to S. V. W. W. & S. Co.	Cash Capital for H. V. W. Co. Uses.
		Common.	Preferred.	Total Cash.	Par.	Net Cash Proceeds.	Nominal Rate.			
10/31	1881	\$300,000	.....	\$300,000	\$338,000	\$337,740	6%	\$300,000	.....	\$300,000
"	1882	300,000	.....	600,000	582,000	581,740	6%	937,740	.....	937,740
"	1883	300,000	.....	600,000	647,000	644,251	6%	1,181,740	.....	1,181,740
"	1884	300,000	.....	600,000	675,000	670,408	6%	1,244,251	.....	1,244,251
"	1885	300,000	.....	600,000	675,000	670,408	6 & 5%	1,270,408	.....	1,270,408
"	1886	300,000	.....	600,000	675,000	670,408	5%	1,270,408	.....	1,270,408
"	1887	375,000	.....	750,000	970,000	967,846	5%	1,707,676	.....	1,707,676
"	1888	375,000	.....	750,000	975,000	962,896	5%	1,712,926	.....	1,712,926
"	1889	375,000	.....	750,000	1,105,000	996,800	5%	1,746,880	.....	1,746,882
"	1890	375,000	.....	750,000	1,105,100	1,102,100	5%	1,852,130	.....	1,852,130
"	1891	537,100	.....	912,100	1,120,000	1,112,600	5%	2,025,286	.....	2,025,286
"	1892	4,800	.....	4,815	1,445,000	1,439,616	5%	2,644,181	.....	2,644,181
"	1893	824,760	.....	1,196,760	1,590,000	1,587,216	5%	2,709,556	.....	2,709,556
"	1894	5,325	.....	1,207,000	1,578,000	1,677,338	5%	2,889,676	.....	2,889,676
"	1895	5,325	.....	1,207,000	1,976,000	1,969,596	5%	3,201,926	.....	3,201,926
"	1896	5,325	.....	1,207,000	2,176,000	2,198,896	5%	3,411,176	.....	3,411,176
"	1897	5,325	.....	1,207,000	2,285,000	2,313,286	5%	3,525,626	.....	3,525,626

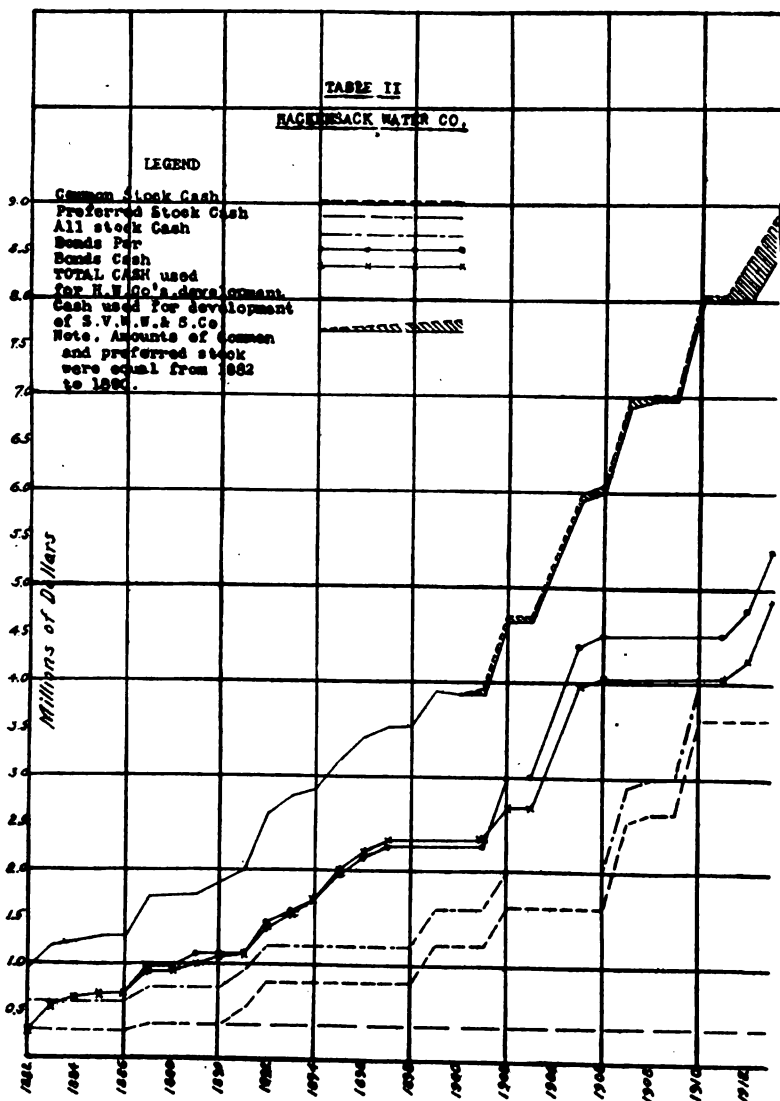
* Issued for property.

Schedule of Rates—Hackensack Water Co.

Ref.	Year Ending	Premiums Received Interlined.			Bonds and Time Loans in 1913.			Total Cash Capital.	Deduct Net Advances to S. V. W. W. & S. Co.	Cash Capital for H. W. Co. Uses.
		Common.	Preferred.	Total Cash.	Par.	Net Cash Proceeds.	Nominal Rate.			
10/31	1898	5,325 } \$832,000	15 } \$375,000	5,340 } \$1,207,000	\$2,285,000	\$2,313,286	5%	\$3,525,626	.....	\$3,525,626
"	1899	5,325 } 1,225,000	15 } 375,000	5,340 } 1,600,000	2,285,000	2,313,286	5%	3,018,626	.....	3,018,626
"	1900	5,325 } 1,225,000	15 } 375,000	5,340 } 1,600,000	2,285,000	2,313,286	5%	3,018,626	\$15,819	3,018,626
"	1901	5,325 } 1,225,000	15 } 375,000	5,340 } 1,600,000	2,285,000	2,313,286	5%	3,018,626	33,069	3,894,687
"	1902	5,325 } 1,225,000	15 } 375,000	5,340 } 1,600,000	3,000,000	2,689,834	4 & 5%	4,696,174	33,810	4,662,364
"	1903	5,325 } 1,225,000	15 } 375,000	5,340 } 1,600,000	3,000,000	2,689,834	4%	4,696,174	48,413	4,647,761
"	1904	5,325 } 1,225,000	15 } 375,000	5,340 } 1,600,000	3,700,000	3,308,615	4%	5,314,955	40,068	5,265,887
"	1905	5,325 } 1,225,000	15 } 375,000	5,340 } 1,600,000	4,425,000	3,981,002	4%	5,894,342	40,074	5,937,008
"	1906	5,325 } 1,225,000	15 } 375,000	5,340 } 1,600,000	4,500,000	4,050,715	4%	6,057,055	48,050	6,008,405
"	1907	5,325 } 2,523,875	15 } 375,000	5,340 } 2,898,875	4,500,000	4,050,715	4%	8,905,980	50,331	8,905,599
"	1908	5,325 } 2,608,500	15 } 375,000	5,340 } 2,983,500	4,500,000	4,050,715	4%	7,040,555	50,616	6,989,939
"	1909	5,325 } 2,608,500	15 } 375,000	5,340 } 2,983,500	4,500,000	4,050,715	4%	7,040,555	51,794	6,988,761
"	1910	5,325 } 3,625,000	15 } 375,000	5,340 } 4,000,000	4,500,000	4,050,715	4%	8,057,055	58,794	7,998,261
"	1911	5,325 } 3,625,000	15 } 375,000	5,340 } 4,000,000	4,500,000	4,050,715	4%	8,057,055	63,901	7,993,154
"	1912	5,325 } 3,625,000	15 } 375,000	5,340 } 4,000,000	4,750,000	4,265,480	4%	8,271,820	278,222	7,993,598
12/31	1913	5,325 } 3,625,000	15 } 375,000	5,340 } 4,000,000	4,750,000	4,750,000	4%	8,941,820	483,091	8,458,729

** Time loans, 1913.
The above table of common stock issued includes small amounts of reacquired stock held in Treasury and resold in 1910.

Schedule of Rates—Hackensack Water Co.



From these tables it will be seen that on December 31st, 1913, there was preferred stock outstanding in the amount of \$375,000; common stock, \$3,625,000. In 1882, the company created a first

Schedule of Rates—Hackensack Water Co.

mortgage and issued bonds in the amount of \$600,000, which carried interest at 6 per cent. In 1883, the company sold \$150,000 of second mortgage bonds, carrying interest at 6 per cent. In 1886 and 1887, a refunding mortgage was created, carrying interest at 5 per cent., and all of the first mortgage bonds were taken up at 105 and the second mortgage bonds taken up at par. In 1892, the company issued a new general mortgage bearing interest at 5 per cent. These bonds were taken up in July and August, 1902, at which time a new mortgage was created in the total amount of \$6,000,000, bearing interest at 4 per cent. On December 31st, 1913, there were bonds outstanding in the total amount of \$4,750,000.

The capital stocks of the Rutherford and Boiling Springs Water Companies are owned by the Hackensack Water Company, and the property located in Rutherford and East Rutherford is included in the properties, the cost of which was given in Table I. as property of the Hackensack Water Company.

DESCRIPTION OF THE PLANT AND SYSTEM.

The history of the construction of the property of the Hackensack Water Company is given in some detail in a report in the matter of the investigation of the service of the Hackensack Water Company, which should be read in connection with this report.

The Hackensack Water Company impounds the flow of water from a shed of 118 square miles in area, and pumps all of this water at New Milford into a distribution and transmission system. A very large percentage of this water is transmitted toward the southeastward as far as Hudson County. A large part of the latter is pumped a second time in order to lift it to the high levels of Weehawken, Fairview and the towns in northern Hudson County. A pumping plant is also located at Englewood, at which point about 2.7 per cent. of the total water is repumped to a very high level. Under present operating conditions about 84 per cent. of the total service supplied requires that water be pumped twice.

Schedule of Rates—Hackensack Water Co.

BASIS FOR RATES.

The rates charged by a water company must be reasonable and must further be so classified as not to put upon any particular class of service a burden which ought to be borne by some other class of service. In other words, they must be non-discriminatory and uniform in their application in the various classes of service and in the various localities served under similar conditions. The Hackensack Water Company supplies water for ordinary domestic consumption, for the use of factories and other industries, and for fire protection. The territory supplied by the company varies from a few feet above sea level to an elevation of over six hundred feet, and the cost of providing service on the different levels is not uniform throughout the entire territory. This lack of uniformity calls for a careful analysis of the costs for each class of service and for service in the various portions of the territory.

The rates charged should yield a sufficient sum in the aggregate to meet the operating expenses, taxes, insurance and allowance for depreciation and a return upon the reasonable investment in the service of the public. It, therefore, becomes necessary to determine—

1. The value of the property.
2. Proper operating expenses.
3. Taxes, insurance and other similar items.
4. Depreciation or replacement.
5. Return upon the value of the property.
6. Allocation of annual revenue to different classes of service and to various localities.

VALUATION.

As before stated, the company filed at the request of the Board a tentative and preliminary report and valuation marked as Exhibit A, prepared by Nicholas S. Hill, Jr. The engineers of the Board made an independent inventory and appraisal under the direction of Dr. Philander Betts, and a report giving the results of this appraisal appears as Exhibits C-5 to C-12, inclusive. Exhibit C-10 is a description of the method employed by the Board's engineer in making the inventory and appraisal. Exhibit C-11 is a comparison of the two appraisals already referred to. Exhibit C-12 gives the detail explanation of overhead charges included by the Board's engineer in his appraisal.

Schedule of Rates—Hackensack Water Co.

Another independent appraisal of the property was submitted on behalf of the company by George W. Fuller. The municipalities employed Weston E. Fuller of the firm of Hazen, Whipple & Fuller, to assist counsel for the municipalities, but Weston E. Fuller did not submit a detailed valuation.

After lengthy and detailed cross-examination of witnesses, the Board authorized the holding of conferences between the engineers representing the Board, the municipalities and the company. The result of these conferences was the adoption by the engineers of a general recommendation to the Board as to the value of the physical property as a whole, exclusive of the land. The figures agreed upon by the engineers, and which are adopted by the Board because, after checking, they appear to be fair and reasonable, are as follows:

Structures, exclusive of land.....	\$7,383,906	
Structural overhead charges.....	1,292,183	
Total		\$8,676,089
Working capital		200,000
Total		\$8,876,089
Accrued depreciation	\$897,975	

As to the value of land, a complete analysis of the company's real estate ledger was made with a view to ascertaining the original cost of all land when purchased, including also all costs of negotiating the purchases. An investigation was made under the direction of the Board's engineer to ascertain the assessed value of all the lands and the results were presented in Exhibit C-5. No real estate experts were employed by the Board to give independent opinions as to land values.

The Hackensack Water Company presented a report prepared by Douglas Robinson, Charles S. Brown & Company, in which was assembled the detailed estimates of a large number of appraisers located in the various portions of the territory. In this appraisal were included certain allowances for plottage or assemblage value which were objected to by counsel for the municipalities. A stipulation was entered into under date of July 7th, 1916, by which the water company, counsel for the Commission and counsel for the various municipalities agreed to a value of

Schedule of Rates—Hackensack Water Co.

all land of \$996,671.59. This stipulation concerning land value is found in Exhibit C-18.

The final conclusions of the engineers concerning valuation which are found in a general recommendation to the Commission in Exhibit C-19 are summarized as follows:

(1) Structures, exclusive of land:	
Woodcliff reservoir	\$378,854
Oradell reservoir	390,456
Intake	69,400
Filters and coagulating basin.....	390,000
Pumping stations and equipment.....	1,174,000
Englewood standpipe	5,000
Weehawken reservoir No. 1.....	110,096
Weehawken reservoir No. 2.....	159,600
Weehawken reservoir No. 3.....	56,000
Carlstadt reservoir	20,500
General structures and equipment.....	160,000
Meters	475,000
Mains and hydrants, excluding uncut paving, but including piecemeal construction	4,000,000
	<hr/>
	\$7,883,906
(2) Structural overheads on the above mentioned structures, including errors and commissions, administrative, legal and engineering expenses, taxes and interest appurtenant to design and construction.....	
	\$1,292,183
(3) Working capital, including cash and stock on hand.....	200,000
	<hr/>
(4) Total cost of reproduction new of structures, plus working capital	\$8,876,089
(5) Accrued depreciation, including wear and tear, obsolescence and inadequacy, as of December 31st, 1913, on the above structures	897,975
	<hr/>
	\$7,978,114
(6) Add value of land.....	996,672
	<hr/>
	\$8,974,786
(7) Add rights of way and releases from damages at book cost,	24,273
	<hr/>
	\$8,999,059
To which add additional cost of coagulants at the New Milford filter plant as a result of the construction of the Oradell reservoir properly chargeable to capital account and which has been deducted from operating expenses as carried on the company's books.....	
	29,000
	<hr/>
Total depreciated value of tangible property.....	\$9,028,059

Schedule of Rates—Hackensack Water Co.

Detailed summary of the above is found in Appendix B.

VALUES.

In the original report on valuation of the property, made by Nicholas S. Hill, Jr., to the water company, and filed at one of the early hearings as Exhibit A, there was an allowance for intangibles calculated somewhat along the line of the Alvord method. The conclusion there reached was that the going value based upon an analysis of the cost of developing a company of the size of the Hackensack Water Company was \$950,000. This amounted to 8.4 per cent. of Mr. Hill's estimate of the gross cost of reproduction, or to 9.2 per cent. of the depreciated value of the property, and was equivalent to about 88½ per cent. of the gross revenue for the year 1913. It was further stated that the estimated cost of building up the business for a water company, as computed by this method, usually averaged between 10 per cent. and 12 per cent. of the gross cost of reproduction, and is not infrequently greater than the annual gross revenue for the last year under consideration.

It is the opinion of the Board that in connection with the valuation of a public utility property for rate-making purposes, equitable treatment requires an allowance for certain elements of intangible cost in addition to the proper values of the physical property itself. This has been determined in the case of *Gately & Hurley v. Delaware and Atlantic Telegraph and Telephone Company* and in *Mantua Township v. New Jersey Gas Company*. In the latter case, the Board held that the valuation of the physical property should take into account all property used and useful in the service of the present consumers, with due allowance for a proper reserve to guarantee continuous service and to take care of customers who may be expected to connect up within the near future. There is no evidence in this case that the property of the Hackensack Water Company is overbuilt. On the other hand, extensive additions are to be made in the near future.

Allowances for intangibles, however, must be based upon the history and experience of the particular company whose affairs are being investigated. In *Mantua Township v. New Jersey Gas*

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Company a careful analysis was made to ascertain the accumulated deficit from the beginning of operations of the company. This was calculated in accordance with what is sometimes called the Wisconsin method, by which the investment each year, and the earnings and expenses for each year, were all carefully analyzed, and the deficits computed and an allowance for depreciation and a return on the investment included.

A detailed examination has been made of the books of account of the Hackensack Water Company from November, 1880, when the first set of books was opened, to December 31st, 1913, the date of the valuation made by the Board's engineers, for the purpose of determining the accumulated cost of establishing the business. Seven per cent. has been used as the rate of return.

The principal facts sought to be established by this examination were two, viz.:

(1st) What was the total investment (as indicated by the proceeds from the sale of securities) made by the Hackensack Water Company from its re-organization in 1880 up to December 31st, 1913, out of which the existing plant has been constructed?

(2d) What, if any, is a fair intangible value to be allowed as of December 31st, 1913, based on the costs of establishing the business?

In determining these matters various assumptions and calculations based upon them have been made.

1ST. TOTAL INVESTMENT.

The examination revealed the fact that the records covered by the first two general ledgers were kept in rather an imperfect manner. Postings to the ledgers were made from the cash books only, no journal having been kept. If a transaction did not involve cash, it did not appear on the ledgers. This entailed a systematic analysis, comparisons of account, and deductions in order to arrive at the facts desired. But, fortunately, the totals for all transactions covered by these two ledgers were summarized and supplemented in order to open ledger No. 3, by which means former conclusions were checked. From this point all transactions were more easily and definitely traced. The *installation* of fixed

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capital is set forth with some degree of clearness, but frequent retirements of fixed capital are indicated by many sales of junk without corresponding credits to fixed capital account for the original cost of the property, including its installation. By reason of a failure to so credit capital account, the balances of fixed capital as shown by the ledgers from year to year are erroneous, at least to the extent of the omitted credits above referred to. It would, therefore, involve considerable work to ascertain the amount of the investment by this method. But the accounting officers of the company evidently realized that depreciation was accruing, though they did not realize its full extent. In 1906, "Construction" account was credited with \$140,723.51; "Horses and Carriages" with \$1,085.00; in 1904, "Meter" account was credited with \$39,775.94; in 1905, 1906 and 1907 the sum of \$10,121.55 (10 per cent. of the cost of new meters bought), was credited to the same account, and, for the years 1908 to 1913 inclusive, the sum of \$74,530.87 was credited (on basis of $2\frac{1}{2}$ per cent. annually of "costs new" of meters owned). The aggregate of these various credits is \$266,236.87, which is about 30 per cent. of the sum agreed upon by the engineers as representing the depreciation accrued up to December 31st, 1913.

The examination revealed, that, with the exception of the first issue of \$300,000 of common stock in 1880, for the purchase of the property, rights and franchises of the older company, the subsequent issues of stock and bonds were sold for cash. The cost of the plant, as it existed on December 31st, 1913, and financing of the Spring Valley W. W. & S. Co., have been met from the proceeds of these sales. If, then, we ascertain the net proceeds of these sales, after deducting bonds discount and premiums, debt expense, and that portion of the proceeds used to finance the Spring Valley W. W. & S. Co., and increase this by the \$300,000 of stock issued for property and franchises of the old company, the remaining sum should represent the investment in the property of the Hackensack Water Company, as it existed on December 31st, 1913. This is shown in Table No. 3 following:

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TABLE III.

TOTAL INVESTMENT AS SHOWN BY AMOUNTS RECEIVED FOR SECURITIES.

	Debt, discount and expenses.	Cash received.	Total.
Common stock, for property, &c.....			\$300,000
Common stock, for cash.....		\$3,325,000	
Common stock, premiums received.....		6,325	
Preferred stock, for cash (prem. \$15).....		375,015	
Debt, discount and expense on bonds—			
1st series, 6% bonds, premium paid.....	\$30,000		
2nd series, 6% bonds, discount paid.....	4,105		
3rd series, 5% bonds, premium paid.....	26,800		
4th series, 5% bonds, premium paid.....	26,780		
5th series, 4% bonds, discount paid.....	383,479		
(of which \$162,063 has accrued).			
Printing, revenue stamps, trustees' fees, &c., on 5 series	13,856		
4% bonds outstanding, par value.....		4,750,000	
Total debt, discount and expense.....	\$484,520		
Total sales of securities.....		\$8,456,340	
Less debt, discount and expense.....		484,520	
Net amount from sales of securities....		\$7,971,820	
Outstanding time loans, Dec. 31st, 1913.....		670,000	
Total cash proceeds		\$8,641,820	
Deduct for Spring Valley W. W. & S. Co. financing:			
Bonds	\$5,850		
Stock	14,000		
Cash advances	470,190		
Total cash advanced	\$490,040		
Less amount of net revenue, from operation, 1900-1908	6,949		
Total capital used for other purposes.....		483,091	
Net cash proceeds for company's own use....			8,158,729
Total, out of which has been constructed the plant and property of the Hack- ensack Water Company to December 31st, 1913			\$8,458,729

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(Detail is shown in Table I. above.)

Comparable with this total of \$8,458,729 is the engineers' agreed value of the tangible property, used and useful as of December 31st, 1913, viz.:

Reproduction cost, new, excluding land.....	\$8,676,089
Less accrued depreciation	897,975
Present value of property, excluding land.....	\$7,778,114
Book value of land (appraised value, \$996,872)	773,392
Working capital	200,000
Total value of tangible property, December 31st, 1913 (exclusive of appreciation on land)	\$8,751,506

This amount agrees very closely with the total out of which has been created the property of the Hackensack Water Company as it existed on December 31st, 1913, and demonstrates that, even after providing for the accrued depreciation of \$897,975, the value of the assets is slightly in excess of the total investment made. It is to be noted, however, that the engineers' agreed value of physical assets includes the property represented by the \$25,000 stock of the Boiling Springs Water Company and the \$25,000 stock of the Rutherford Water Company set forth in the annual reports as investments. The records show these stocks were not paid for in cash, but the debits of \$50,000 were balanced by equal credits to "Construction" account.

2ND. INTANGIBLE VALUE.

In the preceding pages we have shown the total amount of the investment out of which has been constructed the plant of the Hackensack Water Company. If, then, we allow a return of 7 per cent. per annum on this investment as it accrued, from the first issue of capital stock of \$300,000 in 1880 (which we find netted the company property of a value of \$126,000) and on the cash proceeds of all subsequent issues of securities, down to December 31st, 1913, and from the return so computed, deduct the actual return on the same capital as evidenced by dividends and interest paid (and accrued for December, 1913) and by accrued debt, discount and expense and premiums paid on redemption of bonds from 1880 to 1913, excluding therefrom the amounts advanced to the Spring Valley Water Works and Supply Company,

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the difference will include all elements of intangible cost accrued to December 31st, 1913, under the assumed rate of return of 7 per cent.

Such a calculation has been made by the following method: The dates of issue, the amounts sold, and the money received for stocks sold have been tabulated by months, as well as all dividends declared and paid (and accrued for the month of December, 1913). Each monthly sale of stock has been multiplied by the term of years outstanding to ascertain the number of dollars on the basis of one year. For each class of stock the sum of all these "dollar years" has been ascertained and constitutes the "base." The total dividends, then, including extra ones, divided by this base will give the average yearly dividend paid for that class. The rates of dividends have been computed and shown for the original issue for property, for common stock sold for cash, and for preferred stock sold for cash and also for all stock combined. In a similar manner, all the five issues of bonds have each been reduced to "base amounts," in terms of cash received, times, years, outstanding. The interest, accrued debt discount and expense for each issue has been computed and shown, and the average interest for each issue and for the combined issues shown. These items for all stock and bond issues, and for time loans for 1913, are then combined, and from the respective totals deductions are made for the capital furnished to the Spring Valley Water Works and Supply Company at the rate of interest indicated by the sales of securities from 1900 to 1913. The results of the calculations above outlined are shown in Table IV., which follows. This table shows that the final result of making the calculations, as outlined, is that the total investment, reduced to dollars for one year, is \$125,764,705, which has cost \$8,099,259, an average of 6.44 per cent. per annum from 1880 to 1913. This shows a deficit of 0.56 per cent. on the basis of a 7 per cent. return.

On this calculation, 0.56 per cent. of the base of \$125,764,705 indicates an intangible cost of \$704,270.

In Table No. I. the growth of the investment by years is shown in tabular form. The same facts are presented in graphic form in Table II.

In Table No. V. are shown all dividends paid from organization to 1913, inclusive.

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TABLE IV.—TO SHOW DEFICIENCY OF RETURN ON SEVEN PER CENT. BASIS.

Ref.	Remarks.	Par Value.	Premium.	Dollars 1 Yr. (to 12/31/13).	Actual Dividends Paid.		Dividend Accrued for 12/31/13).	Total Cost of Cap.	
					Regular.	Extra.		Amount.	Annual %
STOCK.									
1-311	Stock Common	\$300,000	.....	\$9,954,000	\$503,695	\$235,000	\$1,500	\$740,195	7.4362
1-301	Stock Common	3,325,000	\$6,325	32,406,326	1,942,624	967,100	16,625	2,926,349	9.0296
1-301	Sub-total	\$3,625,000	\$6,325	\$42,892,326	\$2,446,319	\$1,202,100	\$18,125	\$3,693,544	8.5532
1-311	Stock Preferred	375,000	15	11,545,063	690,530	293,750	1,875	966,455	8.5444
1-323	Stock Total	\$4,000,000	\$6,340	\$53,907,409	\$3,137,149	\$1,495,850	\$20,000	\$4,652,999	8.6314
BONDS.									
1-300	1st Series Redeemed	\$600,000	Premiums Received.	\$2,447,698	\$146,890	\$30,000	\$260	\$177,140	7.2371
1-300	2d " "	75,000	.....	203,610	12,927	4,106	139	17,171	8.4353
1-301	3d " "	1,120,000	29,700	17,513,976	895,203	26,800	2,800	887,103	5.0966
1-302	4th " "	1,165,000	38,070	7,774,172	377,691	26,780	2,890	407,451	5.2411
1-303	5th " "	4,750,000	.....	44,520,218	1,929,623	\$74,878	*1,538	2,006,089	4.5069
	Bonds Total	.....	.....	\$72,459,643	\$3,320,324	\$162,063	\$7,517	\$3,489,904	4.8168
1-305	Temporary Loans—1913	\$670,000	.....	\$479,100	\$23,314	.....	.....	\$26,314	5.4924
SUMMARY FOR COST OF CAPITAL, 1890-1913.									
	For stock as above.	\$4,000,000	\$6,325	\$53,907,409	.....	.....	.....	\$4,652,999	8.6314
	Bonds	4,750,000	15	72,459,643	.....	.....	.....	3,489,904	4.8168
	Temporary Loans	670,000	.....	479,100	.....	.....	.....	26,314	5.4924
	Total	\$9,420,000	\$6,340	\$126,846,152	.....	.....	.....	\$8,169,217	6.4402
1-307	Deduct Spring Valley Advances.	483,091	.....	1,061,447	.....	.....	.....	69,958	6.4698
	Hackensack Water Co., used and useful.	\$3,936,909	.....	\$125,784,705	.....	.....	.....	\$8,099,250	6.4400
	Deficiency on 7% basis, Total Intangible Value	.....	.....	.....	.....	.....	.....	704,270	0.5600
	Totals	.....	.....	\$125,784,705	.....	.....	.....	\$8,803,529	7.0000
	Total Intangible Value on 7% basis.	\$704,270

* Accrued to 12/31/13. † Includes premiums, discounts, etc.

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TABLE V.

DIVIDENDS PAID ON COMMON AND PREFERRED STOCK BY YEARS AND CUMULATIVE.

Years.	Common Stock.		Preferred Stock.		All Stock.	
	By Years.	Cumulative.	By Years.	Cumulative.	By Years.	Cumulative.
1880 to June, 1888...		\$38,890		\$105,871		\$155,873
1888	\$22,440	61,880	\$22,362	128,233	\$44,802	189,563
1889	22,440	83,770	22,500	150,733	44,940	234,503
1890	22,440	106,210	22,500	173,233	44,940	279,443
1891	32,226	138,436	22,500	195,732	54,726	334,160
1892	47,868	186,304	22,500	218,233	70,368	404,537
1893	49,920	236,224	22,500	240,733	72,420	476,957
1894	49,920	286,144	22,500	263,233	72,420	549,377
1895	49,996	336,139	22,597	285,830	72,596	621,969
1896	49,920	386,059	22,500	308,330	72,420	694,389
1897	49,920	435,979	22,500	330,830	72,420	766,809
1898	49,920	485,899	22,500	353,330	72,420	839,229
1899	61,424	547,323	22,500	375,830	83,924	923,153
Extra	274,150	821,473	125,000	500,830	399,150	1,322,303
1900	73,500	894,973	22,500	523,330	96,000	1,418,303
1901	73,500	968,473	22,500	545,830	96,000	1,514,303
1902	85,500	1,053,973	22,500	568,330	108,000	1,622,303
1903	97,500	1,151,473	22,500	590,830	120,000	1,742,303
1904	97,500	1,248,973	22,500	613,330	120,000	1,862,303
1905	97,500	1,346,473	22,500	635,830	120,000	1,982,303
1906	97,500	1,443,973	22,500	658,330	120,000	2,102,303
1907	123,971	1,567,944	22,500	680,830	145,471	2,248,774
Extra	406,250	1,974,194	98,750	774,580	500,000	2,748,774
1908	156,510	2,130,704	22,500	797,080	179,010	2,927,784
1909	156,510	2,287,214	22,500	819,580	179,010	3,106,794
1910	187,005	2,474,219	22,500	842,080	209,505	3,316,299
Extra	521,700	2,995,919	75,000	917,080	596,700	3,912,999
1911	217,500	3,213,418	22,500	939,580	240,000	4,152,999
1912	217,500	3,430,919	22,500	962,080	240,000	4,392,999
1913	217,500	3,648,419	22,500	984,580	240,000	4,632,999

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TABLE VI.

DEFICIENCY IN RETURN ON CASH CAPITAL SEVEN PER CENT. BASIS FIRST ISSUE OF \$300,000 COMMON STOCK TAKEN AT \$126,000.

(1) Year Ending	(2) Cash Capital.		(4) Average for Year.	(5) Add Deficit of Pre- ceding Year. Col. (12).	(6) Total Amount at Interest per Annum.	(7) Interest at % on (6).	(8) Returned Dividends, Interest, Discount, Etc.		(10) Net Returns as Taken.	(11) Annual.		(12) Accumu- lated Deficits Carried to (5).	
	At Beginning of Year.	At End of Year.					Total for Company.	Per Cent. Deducted for S. V. W. W. & S. Co.		Surplus.	Deficit.		
10/31/1881.....	\$126,000	\$126,000	\$126,000	\$3,820	\$129,820	\$8,820	\$17,224		\$17,224			\$8,820	
82.....	126,000	763,740	444,870	\$3,820	453,690	31,768	\$17,224		\$17,224			23,344	
83.....	763,740	1,007,740	885,740	23,844	900,064	63,686	60,582		60,582			3,064	
84.....	1,007,740	1,070,251	1,038,968	26,398	1,038,968	74,578	49,701		49,701			24,877	
1885.....	1,070,251	1,068,496	1,068,373	51,275	1,134,648	79,435	66,062		66,062			13,838	
86.....	1,068,496	1,068,496	1,068,496	64,008	1,161,104	81,277	75,432		75,432			6,845	
87.....	1,068,496	1,068,496	1,068,496	64,008	1,161,104	81,277	75,432		75,432			6,845	
88.....	1,068,496	1,068,496	1,068,496	64,008	1,161,104	81,277	75,432		75,432			6,845	
89.....	1,068,496	1,068,496	1,068,496	64,008	1,161,104	81,277	75,432		75,432			6,845	
1890.....	1,068,496	1,068,496	1,068,496	64,008	1,161,104	81,277	75,432		75,432			6,845	
90.....	1,068,496	1,068,496	1,068,496	64,008	1,161,104	81,277	75,432		75,432			6,845	
91.....	1,068,496	1,068,496	1,068,496	64,008	1,161,104	81,277	75,432		75,432			6,845	
92.....	1,068,496	1,068,496	1,068,496	64,008	1,161,104	81,277	75,432		75,432			6,845	
93.....	1,068,496	1,068,496	1,068,496	64,008	1,161,104	81,277	75,432		75,432			6,845	
94.....	1,068,496	1,068,496	1,068,496	64,008	1,161,104	81,277	75,432		75,432			6,845	
1895.....	1,068,496	1,068,496	1,068,496	64,008	1,161,104	81,277	75,432		75,432			6,845	
96.....	1,068,496	1,068,496	1,068,496	64,008	1,161,104	81,277	75,432		75,432			6,845	
97.....	1,068,496	1,068,496	1,068,496	64,008	1,161,104	81,277	75,432		75,432			6,845	
98.....	1,068,496	1,068,496	1,068,496	64,008	1,161,104	81,277	75,432		75,432			6,845	
99.....	1,068,496	1,068,496	1,068,496	64,008	1,161,104	81,277	75,432		75,432			6,845	
1000.....	1,068,496	1,068,496	1,068,496	64,008	1,161,104	81,277	75,432		75,432			6,845	
01.....	1,068,496	1,068,496	1,068,496	64,008	1,161,104	81,277	75,432		75,432			6,845	
02.....	1,068,496	1,068,496	1,068,496	64,008	1,161,104	81,277	75,432		75,432			6,845	
03.....	1,068,496	1,068,496	1,068,496	64,008	1,161,104	81,277	75,432		75,432			6,845	
04.....	1,068,496	1,068,496	1,068,496	64,008	1,161,104	81,277	75,432		75,432			6,845	
1005.....	1,068,496	1,068,496	1,068,496	64,008	1,161,104	81,277	75,432		75,432			6,845	
06.....	1,068,496	1,068,496	1,068,496	64,008	1,161,104	81,277	75,432		75,432			6,845	
07.....	1,068,496	1,068,496	1,068,496	64,008	1,161,104	81,277	75,432		75,432			6,845	
08.....	1,068,496	1,068,496	1,068,496	64,008	1,161,104	81,277	75,432		75,432			6,845	
09.....	1,068,496	1,068,496	1,068,496	64,008	1,161,104	81,277	75,432		75,432			6,845	
1010.....	1,068,496	1,068,496	1,068,496	64,008	1,161,104	81,277	75,432		75,432			6,845	
11.....	1,068,496	1,068,496	1,068,496	64,008	1,161,104	81,277	75,432		75,432			6,845	
12.....	1,068,496	1,068,496	1,068,496	64,008	1,161,104	81,277	75,432		75,432			6,845	
12/21/1913.....	1,068,496	1,068,496	1,068,496	64,008	1,161,104	81,277	75,432		75,432			6,845	
14 months.....	1,068,496	1,068,496	1,068,496	64,008	1,161,104	81,277	75,432		75,432			6,845	
Summary—													\$9,028,096
Capital in Cash.....													\$9,028,096
Accumulated Deficits.....													471,941
Total Capital.....													\$9,500,000

Schedule of Rates—Hackensack Water Co.

TABLE VII.

	(1) Common stock.		Preferred stock.		All stock Profit over 5% comp'd int.	
	Deficit.	Profit.	Deficit.	Profit.	Deficit.	Profit.
(Ref. 1-428, 1-427)						
Nov. 1—1882	\$6,300		\$3,462		\$9,762	
1883	12,915			\$5,612	7,303	
1884	10,786			59	10,727	
1885	17,025			9,512	8,113	
1886	24,760			13,312	11,448	
1887	16,972			17,630		\$658
1888	26,380			23,270	3,610	
1889	863			28,264		27,381

Subject.—The above calculation shows the deficit or profit on a basis of 5 per cent. compound interest on common and preferred stocks (assuming a value of \$126,000 for the first issue of \$300,000 common stock), less actual dividends paid similarly improved at 5 per cent. compound interest. The period of deficits was passed, on a 5 per cent. compound interest basis on stock only, about January 1st, 1889.

(1)—\$126,000 allowed in calculation as value of \$300,000 first issue of common stock.

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TABLE VIII.

SUBJECT: SIX PER CENT. COMPOUND INTEREST ON ALL STOCKS COMPARED WITH DIVIDENDS PAID, PLUS SIX PER CENT. COMPOUND INTEREST. FIRST ISSUE OF \$300,000 COMMON STOCK (FOR PROPERTY) TAKEN AS \$126,000 CASH VALUE.

	Common Stock.		Stock Sold for Cash.		Preferred Stock.		All Stock.		All Stock.	
	Deficit.	Profit.	Deficit.	Profit.	Deficit.	Profit.	Deficit.	Profit.	Deficit.	Profit.
Nov. 1, 1881.....	\$7,500								\$18,000	
1882.....	16,574				\$6,163				43,242	
1883.....	14,978				325				48,040	
1884.....	23,437				8,968		\$7,500		78,078	
1885.....	32,403				2,967		21,786		94,221	
1886.....	28,457				2,875		15,303		102,154	
1887.....	25,604				2,675		32,403		118,921	
1888.....	15,254		\$3,000		1,717		31,279		120,221	
1889.....	5,729				1,483		16,891		127,007	
1890.....		\$4,637			1,234		7,128	\$3,575	134,052	
1891.....		15,625			971			10,829	145,474	
1892.....		27,273		3,825				30,842	145,290	
1893.....		39,619		4,761				57,832	153,143	
1894.....		52,706		5,206	80			43,966	161,505	
1895.....		66,580		5,678		\$350		72,608	170,393	
1896.....		81,295		6,177		708		88,170	179,851	
1897.....		96,872		6,707		1,089		104,668	180,904	
1898.....		113,394		7,269		1,481		122,154	200,500	
1899.....		222,016		188,747		130,608		471,481		\$183,877
May 1, 1896.....										

Schedule of Rates—Hackensack Water Co.

In the above calculation (Table IV.) the stock issue in 1880 of \$300,000 was assumed to produce a corresponding value. In Table VI., however, it is assumed that property of a value of \$126,000 was obtained from the first issue. The conclusion from Table VI. is that the aggregate investment in physical property, and intangible cost on a 7 per cent. return basis, is \$9,501,866.

On the other hand, the policy of the State (see *Long Branch v. Tintern Manor Water Co., N. J. Eq., vol. 70, p. 71*) is to make allowances for deficits in early years, if, and when appropriate, on an ordinary interest basis.

A calculation has been made (see Table VII.) to determine the deficit on a 5 per cent. basis of return. This shows that the deficit in return on stock actually issued for cash was, by 1899, \$15,058. But we find that the normal interest rate prevalent at the time was 6 per cent., and interest on bonds at that rate was actually paid throughout the early years.

A computation was then made (see Table VIII.) to show the deficit in return on a 6 per cent. basis on the invested capital from 1881 to 1899, by which time the property was earning regularly 6 per cent. This shows an accumulation of deficits at the end of 1898 of \$200,500.

The result to the company from 1881 to date has been a net return of 6.44 per cent., which is a net excess over 6 per cent. of \$553,365. This does not mean, however, that the amounts have been paid out as dividends. To arrive at these results, we have included, in "return," not only moneys paid out as dividends and interest, but also bond discount, premiums paid in refunding, and other costs of financing.

In the case involving the service of this company we have found that extensive additions and improvements must be made for the purpose of making the service to present customers proper and adequate. It is estimated that the entire expenditure amounts to \$1,700,000, of which we calculate that \$1,029,700 must be expended for the benefit of present customers. This new construction will, however, result in closing down, for some years at least, the New Durham pumping plant, and we therefore deduct 75 per cent. of the value of the pumping plant machinery, amounting to \$350,255. This leaves an amount of net expenditure for the benefit of present customers of \$679,445.

Schedule of Rates—Hackensack Water Co.

Upon consideration of the results indicated above and taking into account the fact that the result of the service case shows a large amount of property in course of construction and which must be constructed in the immediate future which, while essential in service, will not increase the revenues of the company, we have adopted as a rate base the sum of \$9,500,000, as fair, under all the circumstances, both to the company and its customers.

EARNINGS AND EXPENSES.

During the past few years the Hackensack Water Company has operated under conditions not entirely normal, due largely to the great amount of construction work going on. The dredging of the Oradell reservoir stirred up the clay in the bed of the river to such an extent that the operation of the filters has been extremely expensive. Because the operating expenses of the company have not been on a normal plane, it was necessary to make an analytical study of these expenses.

, ADJUSTMENT OF OPERATING EXPENSES.

On page 157 of volume 1 of Hill's final report, it appears that the operating expenses averaged for 1913 and 1914 were \$387,522. It is stated that additions to, and deductions from, this amount, in Hill's opinion, should be made to arrive at a proper figure, to be adopted as the operating expense on which to base rates.

We have carefully considered his figures and have supplemented them and, in the following, we show in detail the additions and deductions which, in our opinion, should be made. We also take into consideration the modification in miscellaneous water revenue effected by an order of the Board by which the company will, beginning January 1st, 1917, install services from the main to the curb as a charge to capital instead of charging same to customers. This eliminates, substantially, 76 per cent. of the revenue heretofore received from customers for that portion of the services located in the street, but does not affect the fittings to be sold for the remaining portion, located on the customers' premises. We show, then, the operating expense for 1913 and 1914, averaged, and the changes required:

Schedule of Rates—Hackensack Water Co.

OPERATING EXPENSES AS A BASIS FOR RATES.

Operating expense, 1913 and 1914, averaged.....	\$387,522
Additions—	
Maintenance and replacements of services.....	\$9,511
Taxes—increases indicated by later assessments....	20,438
*Amortization of expenses of this case—addition...	2,205
Total additions	38,154
Sub-total	\$425,676
*Average as charged, 1913 and 1914.....	\$4,872
To be added	2,205
Total annual charge	\$7,077
Deductions—	
Cost of services, heretofore paid by customers.....	\$8,654
Purification expenses to be transferred to capital...	29,000
Overhead expenses allowed in stipulation.....	22,500
Englewood coal adjustment.....	522
Total deductions	60,676
Operating expenses as a basis for rates.....	\$365,000

On the basis of detailed calculations, a conclusion has been reached that the annual depreciation reserve should be computed at the rate of 1.1 per cent. upon the cost value of the depreciable property in each current year. On this basis the annual depreciation reserve for the year 1913 amounted to \$95,400, taken as \$95,000.

A return of 7 per cent. on the value calculated above amounts to \$665,000. This added to the allowance for depreciation and operating expenses gives a total of \$1,125,000, which is accepted as a fair revenue based on the operations of 1913 and 1914.

<i>Ref.</i>		
1-367	7% on total capital of \$9,500,000, taken as.....	\$665,000
1-371	Annual depreciation reserve	95,000
1-408	Operating expense, taken as.....	365,000
	Total annual revenue to be provided.....	\$1,125,000
1-407	Less net miscellaneous water revenue and net non-operating revenue (decreased by Board's order in re services) estimated as	16,000
	Annual water revenue to be provided.....	\$1,109,000

 Schedule of Rates—Hackensack Water Co.

Allocated as follows:		
T-215	12.50% for public fire service.....	\$138,625
	20.07% for fixed service charges.....	222,596
	67.43% for proportional metered charges...	747,779
<hr/>		
	100.00% total water revenue proper.....	\$1,109,000

CLASSIFICATION OF GROSS REVENUE.

(By service districts and by classes of consumers.)

Division of the Territory Supplied Into Service Districts.

In order that the proportion of the gross return paid by the customers may reasonably conform to the cost of service rendered to them, the territory supplied by the Hackensack Water Company has been divided into service districts, arranged substantially in accordance with the elevation of the reservoirs to which the water has to be pumped and the distance through which the water has to be transported. The following division of districts, indicated graphically on Diagram No. 1, on the preceding page, is made upon the conditions of service in the respective districts:

New Milford, low service.
 New Durham, low service (Hoboken).
 New Durham, low service (outside Hoboken).
 Weehawken, high service.
 Englewood, high service.

The New Milford Low Service District includes all customers supplied directly and at all times from the New Milford pumps.

The New Durham Low Service District includes all customers supplied at any time through the New Durham low service pumps. This district is subdivided between Hoboken and the territory outside of Hoboken. The Hoboken district includes all service rendered within the city limits of the City of Hoboken. The subdivision of the New Durham district in this manner is made necessary because Hoboken owns its own distribution system.

Schedule of Rates—Hackensack Water Co.

The Weehawken High Service District includes all customers supplied through the Weehawken high service pumps.

The Englewood High Service District includes all customers located north of the northerly limits of the Weehawken High Service District and to the east of the New Milford Low Service District, who are now supplied from the Englewood pumping station, or who may subsequently require additional pumpage through an equivalent pumping plant.

In order to secure an equalization of rates we have classified Weehawken, where there is a large domestic and small manufacturing consumption with the balance of the New Durham Low Service District outside of Hoboken, where there is a large manufacturing and small domestic consumption. In addition, changes in operation, recommended to the company and accepted, will eventuate in reducing the cost of serving Weehawken High Service District and in a parity of costs in both districts.

GROSS CONSUMPTION OF WATER.

The gross revenue bearing water consumption is taken as 915,910,000 cubic feet per year, or 18.77 million gallons daily, the average for the years 1913 and 1914.

The allocation of the gross revenue bearing consumption to service districts is given in the following table:

TABLE No. 9.

SUBDIVISION OF WATER SOLD AT TARIFF RATES TO SERVICE DISTRICTS.

Service District (1)	SUBDIVISION OF CONSUMPTION.		
	1,000 cu. ft. per year. (2)	M. G. D. (3)	Per cent. of total. (4)
New Milford, low.....	152,957	3.13	16.7
New Durham, low, Hoboken.....	237,221	4.86	25.9
New Durham, low, outside Hoboken, 268,362	5.50	29.8	
Weehawken, high	232,641	4.77	25.4
Sub-total	501,003	10.27	54.7
Englewood, high	24,720	0.51	2.7
Total	915,910	18.77	100.0

Schedule of Rates—Hackensack Water Co.

ALLOCATION OF GROSS RETURN.

For the purpose of equalizing the rates and adjusting them so as to secure a return which accords with the cost of service, the following allocation of the gross return has been made:

A. SUBDIVISION OF COST TO SOURCE OF REVENUE.

Return to be obtained from the sale of service.....	\$1,109,000
Miscellaneous receipts, excluding tapping and sundries....	16,000
Total gross return	\$1,125,000

B. SUBDIVISION OF TOTAL WATER REVENUE BY DISTRICTS.

	Per Cent.	Amount.
New Milford, low service.....	24.4197	\$270,814
New Durham, low service, Hoboken.....	19.3924	215,062
New Durham, low service, outside Hoboken	21.6434	\$240,025
Weehawken, high service.....	29.7770	330,227
	<u>51.4204</u>	<u>570,252</u>
Englewood, high service.....	4.7675	52,872
Total	100.0000	\$1,109,000

C. SUBDIVISION OF TOTAL WATER REVENUE BY CHARACTER OF SERVICE.

Fire service charges	=	12.5 %	=	\$138,625
Fixed service charges	=	20.07 %	=	222,596
Proportional service charges (or charges for water used).....	=	67.43 %	=	747,779
Total		100.00 %		\$1,109,000

Schedule of Rates—Hackensack Water Co.

METHOD OF SUBDIVIDING TOTAL COST OF SERVICE BY DISTRICTS.

The subdivision of the total cost of service by districts, including operating expenses, annual reserve for depreciation and capital, is set forth in the following tables, Nos. 10 to 13, inclusive.

The allocation is expressed as a per cent. of the total cost and the amounts chargeable to each service district may be readily ascertained if the gross return is fixed.

TABLE No. 10.

ALLOCATION OF CAPITAL TO SERVICE DISTRICTS.

Items.	Per Cent. of Total Cost.	New Milford Low Service District.	New Durham Low Service District.		Wee- hawken High Service District.	Engle- wood High Service District.
			Hoboken.	Outside Hoboken.		
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Collecting System	17.0280	2.8437	4.4102	4.9882	4.3251	0.4698
Purification System	5.5287	0.9230	1.4314	1.6193	1.4038	0.1492
Pumping System:						
New Milford	6.7958	1.1348	1.7601	1.9912	1.7262	0.1835
New Durham	6.9658		1.5534	1.7553	3.6571	
Englewood	0.2652					0.2652
Storage Reservoirs and Standpipes:						
Weehawken No. 1	2.3894		1.1230	1.2684		
Weehawken No. 2	4.7886		2.2483	2.5353		
Fairview No. 3	1.2615				1.2615	
Carlstadt, Old and New ..	0.2224	0.2224				
Englewood Standpipe	0.0389					0.0389
Alpine Land	0.0730			0.0288	0.0683	0.0059
Mains	44.8488	14.9864	5.4390	6.7265	13.6651	3.5328
Meters	4.1887	1.5059	0.6241	0.2906	1.4912	0.1969
Hydrants	1.6676	0.9332	0.0082	0.1748	0.4481	0.1038
General Structures and Equipment	2.2238	0.5607	0.4281	0.5629	0.6147	0.0569
Working Capital	2.2213	0.5270	0.4322	0.4976	0.6495	0.1150
Total in Percentage of All ..	100.0000	23.7271	19.4570	22.4274	29.2806	5.1079
Taken as	100.0000	23.9279	19.4570	22.6172	29.5285	4.4694

NOTE.—All figures are in percentages of Total Capital.

Schedule of Rates—Hackensack Water Co.

TABLE No. 11.

ALLOCATION OF ANNUAL DEPRECIATION TO SERVICE DISTRICTS.

Items.	Per Cent. of All Deprecia- tion.	New Milford Low Service District.	New Durham Low Service District.		Wee- hawken High Service District.	Engle- wood High Service District.
			Hoboken.	Outside Hoboken.		
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Collection System	0.0256	2.4885	0.7579	0.8574	0.7432	0.0786
Purification System	6.5944	1.1017	1.7076	1.9319	1.6750	0.1782
Pumping System:						
New Milford	13.5158	2.2569	3.5010	3.9602	3.4329	0.3648
New Durham	13.1751	.....	2.9047	3.2872	6.9832	.....
Englewood	0.7662	.....	.....	.....	.....	0.7662
Storage Reservoirs and Standpipes:						
Weehawken No. 1	0.7018	.....	0.3291	0.3722	.....	.....
Weehawken No. 2	0.9822	.....	0.4623	0.5199	.....	.....
Fairview No. 3	0.3301	.....	.....	.....	0.3301	.....
Carlstadt, Old and New	0.4885	0.4885	.....	.....	.....	.....
Englewood Standpipe	0.2275	.....	.....	.....	.....	0.2275
Mains	42.1541	15.2508	5.7890	6.0702	12.5408	2.5502
Meters	10.3920	3.9591	1.5482	0.6960	3.7002	0.4885
Hydrants	4.5461	2.5451	0.0220	0.4748	1.2212	0.2830
General Structures	1.1247	0.3019	0.2170	0.2930	0.2945	0.0283
General Equipment	2.0765	0.3774	0.3941	0.5419	0.7065	0.0566
Total Annual Depreciation	100.0000	26.7789	17.5769	18.9947	31.6273	5.0219
Taken as	100.0000	26.9961	17.5769	19.1487	31.9941	4.8942

NOTE.—Land, Rights of Way, Rock Excavation and Scrap Values not depreciated.
All figures are in percentages of Total Depreciation.

TABLE No. 12.

ALLOCATION OF OPERATING EXPENSE TO SERVICE DISTRICTS.

Items.	Per Cent. of All Expense.	New Milford Low Service District.	New Durham Low Service District.		Wee- hawken High Service District.	Engle- wood High Service District.
			Hoboken.	Outside Hoboken.		
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Collection System	4.0605	0.7783	1.2071	1.8655	1.1538	0.1258
Purification System	11.8903	1.9525	3.0278	3.4253	2.9694	0.8166
Pumping System:						
New Milford	14.5325	2.4270	3.7639	4.2531	3.6911	0.3924
New Durham	8.8456	.....	1.8403	2.0622	4.4231	.....
Englewood	1.8772	.....	.....	.....	.....	1.8772
Storage Reservoirs and Standpipes:						
Weehawken No. 1 and No. 2	2.7481	.....	1.2914	1.4567	.....	.....
Fairview No. 3	0.5333	.....	.....	.....	0.5333	.....
Carlstadt, Old and New	0.0639	0.0639	.....	.....	.....	.....
Englewood Standpipe	0.0108	.....	.....	.....	.....	0.0108
Alpine, Taxes	0.0200	.....	.....	0.0079	0.0105	0.0016
Mains	22.4336	8.0122	2.5436	3.4505	6.7773	1.6900
Meters	7.7514	3.2670	0.9090	0.6528	2.5992	0.4244
Hydrants	1.6336	0.9100	0.0064	0.1700	0.4245	0.1087
Accounting and Uncollectibles	10.9550	3.8708	2.7481	0.8139	3.0205	0.5072
Generals	12.1711	2.9786	2.4011	2.4953	3.5650	0.7361
Working Capital (Taxes on)	0.5736	0.1861	0.1117	0.1286	0.1675	0.0297
Totals	100.0008	24.3909	19.7474	20.3068	29.3752	6.1805
Taken as	100.0000	24.6451	19.7473	20.5184	29.6814	5.4078

NOTE.—Taxes included in all items on basis of cost.

Schedule of Rates—Hackensack Water Co.

TABLE No. 13.

ALLOCATION OF TOTAL SERVICE REVENUE TO SERVICE DISTRICTS IN PERCENTAGE.

District.	Per Cent.	Factor.	Product Per Cent. × Factor.	Per Cent. of Total Revenue (Totals ÷ 11.70).
(1)	(2)	(3)	(4)	(5)
New Milford:				
Operation	24.6451	3.842	94.6865	
Depreciation	26.9861	1.000	26.9861	
Capital	23.9279	7.000	167.4953	
		11.842	289.1779	24.4197
New Durham, Hoboken:				
Operation	19.7473	3.842	75.8691	
Depreciation	17.5769	1.000	17.5769	
Capital	19.4570	7.000	136.1990	
		11.842	229.6450	19.3924
New Durham, Outside Hoboken:				
Operation	20.5184	3.842	78.8317	
Depreciation	19.1487	1.000	19.1487	
Capital	22.6172	7.000	158.3204	
		11.842	256.3008	21.6434
Weehawken:				
Operation	29.6814	3.842	114.0359	
Depreciation	31.8841	1.000	31.8841	
Capital	29.5285	7.000	206.6996	
		11.842	352.6195	29.7770
Englewood:				
Operation	5.4078	3.842	20.7768	
Depreciation	4.3942	1.000	4.3942	
Capital	4.4694	7.000	31.2858	
		11.842	56.4568	4.7675
				100.0000

ALLOCATION OF WATER REVENUE.

24.4197% of \$1,109,000 is	\$270,814
19.3924% of \$1,109,000 is	215,062
21.6434% of \$1,109,000 is	240,025
29.7770% of \$1,109,000 is	330,227
4.7675% of \$1,109,000 is	52,872

100.0000

\$1,109,000

The last column of Table No. 13 gives the percentages of the total cost of service resulting from the allocation set forth in Tables Nos. 10, 11 and 12, and which are given under Subdivision (B) except that the gross return from Englewood was made less than the theoretical cost of service in that district, the difference

Schedule of Rates—Hackensack Water Co.

being equitably divided between the other districts outside of Hoboken, in order to equalize the Englewood rate as compared with those of the other districts. If this were not done, the indications are that the revenue to be derived from this rapidly growing district would soon be disproportionately large. The revenue during 1915, owing to growth and transfers made by the company, increased 84.3 per cent. over the average for 1913 and 1914.

METHOD OF ALLOCATING TOTAL COST OF SERVICE TO CHARACTER
OF SERVICE.

In the foregoing tables an allocation of the total cost of service to the different classes of service, including fire service, has been made. The cost of fire service has been deducted from the total cost of service and the remainder apportioned to the domestic, industrial and public consumers of water.

The total cost of each class of service has been further divided into (1) fixed costs, which include demand or capacity costs, and customer costs, which costs do not vary directly with the cost of output or production, and (2) proportional or variable costs which vary directly with the output or production of water and are usually referred to as production or output costs.

The fire costs are largely fixed. These costs should be met by charges based on the proportion of plant and system required for fire protection, exclusive of hydrants, and an additional charge for each hydrant.

The first element of this charge is proportional to the inch-feet of main in the piping system. By inch-feet is meant the product of the length of a main in feet by its nominal diameter in inches. thus, one foot of 6-inch main is equivalent to six inch-feet.

The costs for domestic, industrial and public consumers should be met by (1) a fixed service charge, payable whether water is taken or not, and (2) a charge covering proportional or variable costs apportioned on the basis of the quantity of water consumed.

Since the fixed costs do not vary appreciably with the cost of the output or production of water, and the fire service costs are largely fixed costs, the fire service charges and the fixed service charges for domestic, industrial and public consumers may be taken as uniform in all districts throughout the entire system.

Schedule of Rates—Hackensack Water Co.

The proportional service costs, however, vary in each district in accordance with the elevation to which water is pumped and the distance which it is transported, or, in other words, such costs vary substantially with the operating cost of delivering the water to the customer. Inasmuch as there is a marked variation in the proportional service costs in this case, due, among other things, to double pumping in certain districts, such variance in costs must be reflected in a variance of charges in the several districts.

BASIS FOR SUBDIVIDING TOTAL COST OF SERVICE.

A. Fire Service Charges.

The extra cost of furnishing fire protection is due to the increased pumping capacity; increased size of mains and distributing reservoirs required; the cost of hydrants; and the increased pressures which it is necessary to carry, all of which result in increased cost of operation and maintenance. A large part of the water plant in any town where fire protection is furnished, is simply held in readiness for that purpose. It may not be called into use very often, but the plant must be in constant readiness to serve. The question of the cost of fire service is, therefore, one of fair and just distribution of the total expenses of the plant between the taxpayer as such and the customer as such. If the amount paid for fire service is too low, the water consumer bears a part of the burden which should be properly borne by the taxpayer. The entire community derives a benefit from adequate fire protection, and the cost of this protection should be borne by the taxpayer. In this respect, the present schedule of rates of the Hackensack Water Company is entirely inequitable since the charges for fire service are but a fraction of what the service costs the company, and the domestic customers are now carrying the burden which should be borne by all the taxpayers as such.

The elements of ascertained cost in this case have been apportioned to fire service on the following basis:

Plant value and fixed charges...	14.5%	of the total fixed charges.
Depreciation	13.5%	of the total depreciation.
Operating expenses	8.5%	of the total operating expenses.

Weighted average12.5% of the gross charges for water service.

Schedule of Rates—Hackensack Water Co.

In subdividing the gross fire service cost between hydrant rentals and the inch-foot charge, it is found that \$6 per hydrant will cover interest and depreciation on the cost of installing each hydrant, plus the cost of repairs, maintenance and taxes. This figure has been adopted as the unit charge per hydrant. The inch-foot charge has been determined by deducting the total revenue derived from hydrants at the rate of \$6 each, from the total fire service charge and dividing the remainder by the total number of inch-feet in the Hackensack system, as follows:

Total fire service charge	\$138,625
Deduct total hydrant rental on 2,822 hydrants at \$6 each.....	16,932
<hr/>	
Total revenue to be derived from the inch-foot charge.....	\$121,693
Total number of inch-feet in the Hackensack system.....	23,406,379
Charge per inch-foot = $\$121,693 \div 23,406,379$ inch-feet = .52 cents	
(exact amount 0.51891 has been used in computations). See	
Table XIV.	

B. Fixed Service Costs.

Fixed service costs are composed of two elements—the demand, capacity or readiness to serve cost, and the service or customer cost.

1. Capacity or demand costs—

The capacity or demand costs vary with the capacity which a plant must have to meet the maximum demand without regard to the amount of water consumed. In every plant sufficient capacity to meet the demands which the company has contracted to supply when called upon so to do, must be provided in addition to the capacity necessary to meet the normal demand. The plant necessary to meet the spasmodic or unusual demand lies idle for a large proportion of the time. The capacity or demand cost is, therefore, chargeable to plant made necessary to meet the contractual obligation of the company to furnish the maximum demand, and is in substance a readiness to serve charge. The material, labor and interest appurtenant to this reserve capacity have been included in capacity or demand costs.

Schedule of Rates—Hackensack Water Co.

2. Service or customer costs—

In addition to the capacity or demand costs, the service or customer costs must be provided for. These costs result directly from the service rendered to the customer, for instance, the reading of meters, the rendering and collecting of bills, and other costs which do not accrue if the plant existed in its entirety without customers.

Total fixed service costs—

The total fixed service cost is equivalent to the sum of the capacity or demand costs, and the service or customer costs. These costs vary generally in proportion to the demand which the customer may make on the plant.

The one-half-inch meter has been adopted as the capacity unit and has therefore been taken as the basis of charging for the fixed service cost.

The fixed service charge for any other size of meter will, therefore, be in the proportion of its capacity to the capacity of the one-half-inch meter. The term capacity unit, then, as hereinafter used, will refer to the capacity of the one-half-inch or five-eighths-inch meter.

The unit capacity charge will, therefore, be the quotient of the total theoretical revenue which should be derived from the fixed service cost divided by the total number of capacity units in the plant.

The theoretical fixed service cost being ascertained and the diversity factor in the individual peak loads, aided by the storage reservoirs being considered, a fixed charge of \$4 for each capacity unit has been adopted. This does not include any water.

The capacity ratio of each size of meter, based upon data submitted and the corresponding annual fixed service charge, are listed in columns (2) and (4), respectively, of the following computation of the total fixed service revenue:

Schedule of Rates--Hackensack Water Co.

Size of Meter.	Capacity, Ratio.	Capacity, Units.	Fixed service, Charge per meter.	Number of Meters in. systems.	Fixed Service Revenue.
(1)	(2)	(3)	(4)	(5)	(6)
½-inch..	1.0	31,495	\$4	31,495	\$125,980
⅝-inch..	1.0	10	4	10	40
¾-inch..	1.7	4,498	7	2,646	17,992
1-inch..	3.6	3,888	14	1,080	15,552
1½-inch..	9.0	612	36	68	2,448
2-inch..	12.0	3,084	48	257	12,336
3-inch..	29.0	1,595	116	55	6,380
4-inch..	42.0	2,772	168	66	11,088
6-inch..	79.0	4,503	316	57	18,012
8-inch..	127.0	3,048	508	24	12,192
10-inch..	144.0	144	576	1	576
Total,		55,649		35,759	\$222,596

C. Proportional-Service Charges (or charges for water used).

Having deducted the revenue from fire service charges from the total cost of service, the fixed service charges have been deducted from the remainder. The balance represents the amount to be derived from the proportional-service charges for water used.

D. Total Return From Water Revenue Subdivided.

The proper subdivision of the several charges may be set up as follows:

Source of Revenue.	Per Cent.
Gross revenue from service charges.....	100.0
Deduct fire service revenue.....	12.5
Remainder to be derived from domestic, industrial and public consumers	87.50
Revenue from fixed service charges, about.....	20.07
Balance to be derived from proportional-service charges, about.....	67.43

BASIS OF SUBDIVISION OF SERVICE COSTS BETWEEN DISTRICTS.

To determine the total water revenue to be obtained from each district it is necessary to determine the revenue to be derived from fire service by districts.

Schedule of Rates—Hackensack Water Co.

FIRE SERVICE CHARGES.

The revenue which will be derived from hydrants in each district is ascertained by multiplying the number of hydrants in such district as of December 31st, 1913, by the charge of \$6 per hydrant. In like manner the total number of inch-feet in the distribution system chargeable in each service district, multiplied by the unit inch-foot charge of 0.52 of a cent gives the revenue from this source to be obtained from each district.

The method of apportioning the inch-foot charges to the different districts is as follows:

1st. Determine the total revenue to be derived from fire service by taking 12.5 per cent. of the gross revenue allowed the company.

2d. Deduct from this the total revenue which will be received from hydrant rentals at \$6 per hydrant.

3d. Divide the residual fire service revenue thus determined by the total number of inch-feet in the piping system of the company, and thus fix the average inch-foot rate.

4th. Separate the piping system into transmission and distribution mains by treating all mains 16 inches and larger as transmission mains, and all mains 12 inches and smaller as distribution mains.

5th. Apportion the number of inch-feet in a given transmission main supplying more than one service district in proportion to the population in each district served.

6th. Charge all transmission mains supplying but one service district to the district which they supply.

7th. Charge all distributing mains to the service district which they serve.

The calculations applying to the New Milford low service district, given below, will illustrate the method:

1st to 3rd steps:	Average inch-foot charge.....	0.52 cents
4th step:	Inch-feet of transmission mains in whole system	8,223,136
	Inch-feet of distribution mains in whole system	15,183,243
5th and 6th steps:	Inch-feet of transmission mains chargeable to New Milford Low Service District....	1,546,606
7th step:	Inch-feet of distribution mains in New Milford Low Service District.....	9,580,538

Schedule of Rates—Hackensack Water Co.

Total charge to New Milford:

1,692 hydrants at \$6 each, equals.....	\$10,152
1,546,606 inch-feet of transmission mains at 0.52 cents, equals	\$8,041
9,580,538 inch-feet of distribution mains at 0.52 cents, equals	49,810
11,127,144 inch-feet of mains, equals.....	57,851
	<u>\$68,003</u>

The bill for fire service rendered to any taxing district will be based upon the number of hydrants and number of inch-feet of distribution mains (mains 12 inches and smaller in size) located within the district, plus the number of inch-feet of transmission mains (mains 16 inches and larger in size) chargeable to the district in accordance with the rule outlined just above. To illustrate, a bill for the borough of Bergenfield for the year 1913 would be:

Number of inch-feet.

Year.	Number of hydrants.	Distributing mains (12 inches and smaller).	Transmission mains (16 inches and larger).	Total.	At \$6 per hydrant.	At \$0.0052 per inch-foot.	Total.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1913...	38	243,970	39,902	282,872	\$228	\$1,476	\$1,704

The complete schedule of fire protection charges for all the municipalities is given in Table No. 14.

Schedule of Rates—Hackensack Water Co.

TABLE No. 14.

SUBDIVISION OF FIRE SERVICE CHARGES TO TAXING DISTRICTS.

Taxing District.	Basis of Charge to Taxing District as of Dec. 31, 1914.			Fire Service Charge to Each Taxing District.			
	Number of Hydrants.	Number of Inch-Feet of Mains.		Based on		Total.	
		Distribution System (12" and Smaller).	Transmission System (18" and Larger).	Total (All Sizes).	Hydrant Charge of \$6.	Inch-Feet Charge of \$0.0062.	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Bergenfields	38	243,970	89,902	283,872	\$228	\$1,476	\$1,704
Bogota	14	74,052	22,590	106,612	84	502	586
Carlstadt	39	544,890	76,248	621,138	234	3,229	3,463
Cliffside Park	60	385,570	62,426	447,996	360	2,829	2,889
Closter	54	302,818	29,695	332,513	324	1,729	2,053
Cresskill	38	201,760	10,981	212,741	228	1,106	1,334
Delford	40	297,704	20,108	317,810	240	1,652	1,892
Demarest	28	191,082	11,138	202,818	168	1,055	1,223
Dumont	32	211,448	35,727	247,175	192	1,295	1,477
East Rutherford	71	826,474	85,527	912,001	426	2,142	2,568
Edgewater	70	801,798	140,460	942,257	420	2,331	2,751
Emerson	18	113,448	15,311	128,759	108	669	777
Englewood	172	1,094,512	141,688	1,236,150	1,082	6,271	7,353
Englewood Cliffs	12	295,150	1,128	296,278	72	1,072	1,144
Fairview	37	194,992	56,521	251,513	222	1,256	1,478
Fort Lee	62	574,167	12,312	586,479	372	3,049	3,421
Guttenberg	50	160,112	297,104	457,216	300	1,857	2,157
Hackensack	265	1,257,354	231,637	1,488,991	1,580	8,601	9,581
Harrington Park	31	104,542	7,733	112,275	186	844	1,030
Hasbrouck Heights	53	357,504	42,966	400,460	318	2,062	2,400
Haworth	25	182,512	11,764	194,266	160	1,010	1,160
Hilldale	40	198,096	21,498	219,594	240	1,381	1,621
Hoboken	18	116,938	2,478,881	2,595,769	108	13,496	13,604
Leonia	41	231,026	27,105	258,191	246	1,342	1,588

Schedule of Rates—Hackensack Water Co.

TABLE No. 14—(Continued).

SUBDIVISION OF FIRE SERVICE CHARGES TO TAXING DISTRICTS.

Taxing District.	Basis of Charge to Taxing District as of Dec. 31, 1914.			Fire Service Charge to Each Taxing District.		
	Number of Hydrants.	Number of Inch-Feet of Mains.		Based on		Total.
		Distribution System (12" and Smaller).	Transmission System (18" and Larger).	Total (All Sizes).	Hydrant Charge of \$6.	Inch-Feet Charge
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Little Ferry	41	170,196	50,833	221,079	\$246	\$1,149
Lodi	2	11,490	13,919	25,409	12	132
Maywood	41	178,548	17,786	196,334	246	1,021
Moonachie	13	83,436	12,662	96,118	78	500
North Bergen	215	943,042	616,363	1,559,405	1,290	8,108
Norwood	39	169,294	11,290	210,584	288	1,005
Palisades Park	34	179,724	28,303	208,027	207	1,062
Pallisades Township	20	111,824	22,890	134,214	130	698
Ridgefield	41	130,350	17,538	147,943	236	769
Ridgefield Park	87	466,318	90,167	556,485	522	2,863
Riverside	18	149,172	14,603	163,865	108	863
Rutherford	100	777,982	141,050	918,782	600	4,777
Secaucus	49	379,206	289,763	668,971	294	3,478
Teaneck	54	391,330	41,804	432,034	324	2,251
Tranquility	74	408,022	55,059	463,081	444	2,408
Union	123	393,122	717,070	1,085,201	758	5,642
Wallington	2	53,356	11,445	64,801	12	337
Weehawken	121	370,472	458,659	829,131	736	4,311
West Hoboken	210	772,760	1,206,914	1,979,674	1,290	10,293
West New York	164	610,114	500,212	1,110,326	984	5,619
Westwood	60	339,520	37,428	376,948	360	1,909
Woodridge	17	266,524	20,879	225,203	102	1,162
Total	2,822	15,163,243	8,223,136	23,406,379	\$16,082	\$121,693
						\$186,626

Schedule of Rates—Hackensack Water Co.

CUSTOMERS' CHARGES.

A. Fixed Service Charges.

The fixed service charge for any district is ascertained by determining the number of meters in service on December 31st, 1913, in such district. The total number of capacity units in such district is ascertained by multiplying the number of each size of meter by the relative capacity in units. The number of capacity units for a given district, as shown in Table No. 15, multiplied by the unit charge of \$4, produces the total revenue to be derived from the fixed service charge in that district.

Schedule of Rates—Hackensack Water Co.

TABLE No. 15.
NUMBER OF METERS AND CAPACITY UNITS IN EACH SERVICE DISTRICT.

Size of Meters.	Capacity Ratio.	New Durham Low Service District.				Weehawken High Service District.				Englewood High Service District.				Total.
		Hoboken.		Outside Hoboken.		No. of Meters.		Capacity Units = (2) × (7).		No. of Meters.		Capacity Units = (2) × (11).		
		No. of Meters.	Capacity Units = (2) × (5).	No. of Meters.	Capacity Units = (2) × (7).	No. of Meters.	Capacity Units = (2) × (9).	No. of Meters.	Capacity Units = (2) × (11).	No. of Meters.	Capacity Units = (2) × (13).			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	
1/4"	1.0	14,877	14,877	3,034	3,034	1,481	1,481	10,837	10,837	1,466	1,466	31,495	31,495	
1/2"	1.0	0	0	10	10	0	0	0	0	0	0	10	10	
3/4"	1.7	463	779	1,019	1,732	169	270	907	1,542	103	175	2,646	4,488	
1"	3.6	165	594	621	2,236	74	268	181	652	89	140	1,086	3,888	
1 1/4"	8.0	19	171	31	278	36	38	11	98	3	27	68	812	
2"	12.0	70	840	99	708	37	444	74	898	17	204	287	3,084	
3"	28.0	15	435	17	493	6	174	15	435	2	58	55	1,595	
4"	42.0	12	504	14	588	10	420	24	1,008	6	252	66	2,772	
6"	79.0	13	1,027	10	790	11	868	21	1,659	2	168	57	4,503	
8"	127.0	1	127	5	635	10	1,270	6	1,762	2	254	24	3,048	
10"	144.0	0	0	1	144	0	0	0	0	0	0	1	144	
Total.....		15,480	19,154	4,821	10,949	1,792	5,280	12,076	17,882	1,640	2,784	35,759	55,649	

Schedule of Rates—Hackensack Water Co.

B. Proportional Service Charges for Water Used.

Deducting the fire service charges, plus the fixed service charges, as determined for each district, from the gross revenue to be derived from that district, the result is the revenue to be derived from the proportional service charge for water used. This sum divided by the gross quantity of water supplied to the district, as set forth in Table No. 9, gives the average proportional charge per thousand cubic feet of water supplied to that district.

The process of determining the average proportional charge in the several districts may be illustrated by the results worked out for the New Milford Low Service District which are as follows:

Total revenue chargeable to New Milford (see Table No. 13)	\$270,814
Fire service revenue from New Milford.....	\$68,003
Fixed service revenue from New Milford.....	76,616
	<hr/> 144,619
Proportional service revenue from New Milford for water used	\$126,195
Water consumed in New Milford, 1,000 cu. ft. (Table No. 9)	152,957
Average proportional service charge in	
New Medford = $\$126,195 \div 152,957 = \$.825$ per 1,000 cu. ft.	

SUBDIVISION OF UNITS ON WHICH DISTRICT SERVICE CHARGES HAVE BEEN BASED.

The following table gives the subdivision of units on which district charges have been based; Weehawken high and New Durham low outside of Hoboken have been in this table, and will hereafter be combined for the purpose of making rates.

Schedule of Rates—Hackensack Water Co.

TABLE No. 16.

SUBDIVISION OF UNITS ON WHICH DISTRICT SERVICE CHARGES HAVE BEEN BASED.

Service district.	Number of hydrants.	Number of inch-feet.	Number of meters.	Number of capacity units.	Basis for proportional charges.	
					Basis for fire service charges.	Basis for fixed service charges.
(1)	(2)	(3)	(4)	(5)	Quantity of revenue bearing water.	Per cent. of total.
New Milford Low..	1,092	11,127,143	15,430	19,154	152,957	16.7
New Durham Low (Hoboken)	18	2,595,769	4,821	10,409	237,221	25.9
New Durham Low (outside Hoboken) and Weehawken High	953	8,242,932	13,868	23,112	501,003	54.7
Englewood High ..	159	1,440,533	1,640	2,734	24,729	2.7
Total	2,822	23,406,379	35,759	55,649	915,910	100.0

SUBDIVISION OF DISTRICT CHARGES TO CHARACTER OF SERVICE.

The apportionment of fire service charges and fixed and proportional service charges to customers other than fire, by districts, as set forth in the following table, shows the exact revenue to be derived from each source in each district and fixes the basis on which the sliding scale rates may be formulated.

Schedule of Rates—Hackensack Water Co.

TABLE No. 17.

SUBDIVISION OF DISTRICT CHARGES TO CHARACTER OF SERVICE.

Service District.	Fire Service Charge.		Return from Domestic, Industrial and Public Consumers.				Total Water Rental.	
			Fixed Service Charge.		Proportional Service Charge.			
	Amount. \$	Per Cent.	Amount. \$	Per Cent.	Amount. \$	Per Cent.	Amount. \$	Per Cent.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
New Milford Low.....	\$68,003	49.06	\$76,616	34.4	\$126,195	16.88	\$270,814	24.4197
New Durham Low, Hoboken	13,004	9.81	42,596	19.1	158,962	21.24	215,062	19.3924
New Durham Low, Outside Hoboken and Weehawken High..	48,574	35.04	92,448	41.6	429,230	57.40	570,252	51.4204
Englewood High	8,444	6.09	10,936	4.9	83,492	4.48	52,872	4.7675
Total	\$188,625	100.00	\$222,596	100.0	\$747,779	100.00	\$1,109,000	100.0000

SUBDIVISION OF FIRE SERVICE CHARGES TO TAXING DISTRICTS.

For the purpose of securing fire service revenue, it is necessary to subdivide the fire service charges by taxing districts. This allocation is based upon the same principles as the allocation of fire service charges to service districts, as shown just above, Table No. 15.

RATE SCHEDULE OF PROPORTIONAL SERVICE CHARGES.

Average District Rate.

From the data already outlined, the determination of the average proportional service charge in any district is simple. It is made by

Service District.	Average Proportional Charge.
New Milford Low.....	\$.825 per 1,000 cu. ft.
New Durham Low, Hoboken.....	.670 " 1,000 "
New Durham Low (outside Hoboken) and Weehawken High .....	.857 " 1,000 "
Englewood High	1,355 " 1,000 "
System as a whole.....	\$.816 " 1,000 "

Schedule of Rates—Hackensack Water Co.

Basis of Sliding Scale Rates.

The following subdivision of the sliding scale is adopted:

- Domestic: The first 40,000 cubic feet of water per year.
 Intermediate: Water in excess of 40,000 and under 400,000 cubic feet per year.
 Manufacturing: Water in excess of 400,000 and under 4,000,000 cubic feet per year.
 Special: Water in excess of 4,000,000 cubic feet per year.

The percentages of water which will be sold under each of these subdivisions in the different districts are given in the following tabulation as a per cent. of the total in the district:

TABLE No. 18.

RELATIVE PERCENTAGE OF WATER SOLD AT SLIDING SCALE RATES.

Service District.	Domestic.	Inter- mediate.	Manufac- turing.	Special.	Total.
(1)	(2)	(3)	(4)	(5)	(6)
New Milford Low.....	68.5	12.6	5.4	13.5	100.0
New Durham Low, Hoboken .....	....	....	....	....	100.0
New Durham Low (outside Hoboken) and Weehawken High	33.4	8.4	11.5	46.7	100.0
Englewood High	71.0	11.8	17.2	0.0	100.0
System as a whole outside Hoboken	42.7	9.5	10.3	37.5	100.0

Schedule of Rates—Hackensack Water Co.

SCHEDULE OF PROPORTIONAL SERVICE CHARGES.

Upon the basis just outlined the following schedule of sliding scale rates results:

TABLE No. 19.

SLIDING SCALE RATES.

Service District.	Domestic—0—40,000 cu. ft. per yr. \$ per 1,000 cu. ft.	Intermediate—40,000— 400,000 cu. ft. per yr. \$ per 1,000 cu. ft.	Manufacturing—400,000— 4,000,000 cu. ft. per yr. \$ per 1,000 cu. ft.	Special—over 4 million cu. ft. per yr. \$ per 1,000 cu. ft.
(1)	(2)	(3)	(4)	(5)
New Milford Low.....	0.88	0.80	0.73	0.65
New Durham Low, Hoboken...	...	...	...	...
New Durham Low (outside Hoboken) and Weehawken				
High	1.15	0.90	0.80	0.65
Englewood High	1.50	1.10	0.92	...

CHARGES FOR DOMESTIC, INDUSTRIAL AND PUBLIC SERVICE.

1. *Service Afforded for Rates Paid.*

The charges here below given include all costs for water service, including the installation of the service pipe from street main to curb and the necessary meters on the customers' premises, together with the cost of maintaining and repairing the service connection between main and curb, and the meters as installed, except that the customer will bear the cost of the service pipe from curb to house. The charges do not, however, include pipe extension guarantees from customers requiring extension of mains when the sum of the revenue from fire service, fixed service and proportional service is insufficient to yield a fair return on the cost of the extension.

Schedule of Rates—Hackensack Water Co.

2. Definition of a Customer.

“Customer,” as used herein, shall be the party contracting for service to a property as hereinafter classified, i. e.—

- (a) A building under one roof owned by one party and occupied as one business or residence, or
- (b) A combination of buildings owned by one party in one common enclosure occupied by one family or business, or
- (c) The one side of a double house, having a solid vertical partition wall, or
- (d) A building owned by one party of more than one apartment and using in common one hall and one entrance, or
- (e) A building owned by one party and having a number of apartments or offices and using in common one hall and one or more means of entrance.

3. Fixed Service Charges.

Fixed service charges shall be applied to each meter.

4. Proportional Service Charge.

A customer having two or more meters on the same premises, shall be billed at the scheduled rate for the quantity of water equivalent to the sum of the readings of all the meters.

Where a customer has two or more meters located on the same premises, but in different service districts, the sum of the readings of all meters on the same premises shall be ascertained. The sum of the readings of all meters in each district shall also be ascertained. The gross rate for a consumption equivalent to the sum of the readings of all meters on the premises shall be ascertained for each district, and this district rate for the consumption shall be applied to the sum of the readings in each district.

5. Private Fire Hydrants.

In view of the fact that the municipalities are paying the operating and capital costs attached to fire service on the inch-foot

Schedule of Rates—Hackensack Water Co.

basis, customers desiring private fire hydrants for which hydrant rental is not paid by the municipality will pay at the rate of \$6 per hydrant, being the same rate made to the municipality and representing the interest, maintenance and depreciation on the hydrant proper.

RESULTS OF THE NEW SCHEDULE.

The effect of the application of the new schedules to the business of the Hackensack Water Company has been given consideration and the results appear to be somewhat as follows:

Based upon the business done in 1913 and 1914, the gross amount collected from ordinary residence and commercial customers will be reduced about \$200,000. The amount charged for fire protection service will be increased from about \$35,500 to \$138,625. Appendix D is a list of typical customers showing the effect of the new rates.

From the analysis, a summary of which is given below, it is clear—

(1) That the ordinary small customers have been paying for service at rates higher than were just and reasonable.

(2) That the rates charged for the wholesale consumption of water have been lower than the proper cost for such class of service.

(3) That the rates charged for fire protection service have been altogether too low to cover the cost of such service, the result being that the small customer, as such, has been paying what should have been paid by some of the very large wholesale customers, and has also been making up what should have been paid by the taxpayers, as such, in their payment for fire protection service.

(4) The new rates for water consumption will make it possible for small customers to increase their use of the water without a proportionate increase in the charge for the same.

(5) The new schedule for fire protection service will enable the municipalities to install the greatly increased number of hydrants required to furnish proper fire protection, as these hydrants are to be charged for at \$6 each, the cost due to the increased size of

Schedule of Rates—Hackensack Water Co.

mains for fire protection being carried through the medium of a fixed charge per inch-foot of main.

Appendix E is a schedule showing the number of hydrants now in place and the total charges now made for such service. It also shows the charges for the same hydrants under the new schedule of rates. (See also Table 14, above.)

Appendix F gives the list of hydrants required to afford the adequate fire protection demanded by the municipalities. Appendix F shows that there are at present in place 2,822 hydrants, and also shows that 4,697 hydrants are required to afford the proper protection. The additional 1,875 hydrants will increase the total cost for fire protection under the new schedules by only the amount of \$11,250.

CONCLUSIONS.

The Board, therefore, finds and determines that the existing schedule of rates of the Hackensack Water Company is unjust and unreasonable and unduly discriminatory against the ordinary domestic customers, and unduly favorable to the large wholesale customers and with regard to the rates for fire protection. The Board fixes as the just and reasonable rates to be charged by the Hackensack Water Company the following:

Rates for domestic, commercial and manufacturing purposes consist of two parts or elements—first, a fixed charge, and second, a proportional charge. The fixed charge is based upon the size of the meter required to furnish the service for the given property and is as follows:

$\frac{1}{2}$ or $\frac{5}{8}$ -inch.....	\$1.00 per quarter.
$\frac{3}{4}$ -inch.....	1.75 " "
1-inch.....	3.50 " "
1½-inch.....	9.00 " "
2-inch.....	12.00 " "
3-inch.....	29.00 " "
4-inch.....	42.00 " "
6-inch.....	79.00 " "
8-inch.....	127.00 " "
10-inch.....	144.00 " "

Schedule of Rates—Hackensack Water Co.

The fixed charge shall be uniform throughout the entire territory served by the company.

In addition to the fixed charge, all water supplied shall be charged for in accordance with a sliding schedule of rates which will vary in the different districts as follows:

New Milford District:

For the first 40,000 cu. ft. in the year.....	\$0.88 per M. cu. ft.
For the excess over 40,000 and up to and inclusive of 400,000 cu. ft. in the year.....	0.80 " " "
For the excess over 400,000 cu. ft. and up to and inclusive of 4,000,000 cu. ft. in the year.....	0.73 " " "
For the excess over 4,000,000 cu. ft. in the year.....	0.65 " " "

New Durham Low Level District (outside of Hoboken) and Weehawken High Service District:

For the first 40,000 cu. ft. in the year.....	\$1.15 per M. cu. ft.
For the excess over 40,000 cu. ft. and up to and inclusive of 400,000 cu. ft. in the year.....	0.90 " " "
For the excess over 400,000 cu. ft. and up to and inclusive of 4,000,000 cu. ft. in the year.....	0.80 " " "
For the excess over 4,000,000 cu. ft. in the year.....	0.65 " " "

Englewood High Service District:

For the first 40,000 cu. ft. in the year.....	\$1.50 per M. cu. ft.
For the excess over 40,000 cu. ft. and up to and inclusive of 400,000 cu. ft. in the year.....	1.10 " " "
For the excess over 400,000 cu. ft. in the year.....	0.92 " " "

Rates for fire protection service are made up of two parts—a fixed charge and a charge for each hydrant.

Fixed Charge:

Fifty-two hundredths of one cent per inch diameter per foot of main, applicable to all distribution mains 4 inches and larger now in place and to mains 6 inches and larger laid in the future; applicable also to the proportion of transmission system utilized in serving the particular municipality.

Hydrant Charge:

\$6 per annum for each hydrant.

Schedule of Rates—Hackensack Water Co.

The rates fixed herein to become effective January 1st, 1918.

The results which we have reached are based upon an independent consideration by us of the entire record and calculations independently made upon data included in the record.

In such consideration we have been aided to an unusual degree by the efforts of counsel and engineers of the municipalities and the company to develop the facts fully and afford a sound and certain basis for a just and reasonable determination.

The results so independently reached by us accord in general with the conclusions likewise independently reached by counsel and engineers of the municipalities.

Dated April 28th, 1917.

Schedule of Rates—Hackensack Water Co.

APPENDIX A.

EXTRACT FROM PAGE 31 OF THE ANNUAL REPORT OF THE HACKENSACK WATER COMPANY.

Year Ending December 31st, 1913.

RATES.

The entire system of the company (with insignificant exceptions in Hackensack) is metered, and meters are supplied by and are the property of the company. There are no discounts.

Rates are uniform in all territory within the company's system, except in Upper Englewood and Englewood Cliffs, which are supplied by a separate high service system, built on the application of residents of these districts on their offer to pay double rates.

The rates are as follows:

	(Per 1,000 cu. ft.)
Less than 5,000 cu. ft. per quarter.....	\$1.75
Between 5,000 and 225,000 cu. ft. per quarter.....	1.45
Between 225,000 and 300,000 cu. ft. per quarter.....	1.30
225,000-600,000 per quarter.....	1.20
200,000-600,000 per month.....	1.15
600,000-1,200,000 per month.....	1.10
1,200,000-2,400,000 per month.....	1.05
Over 2,400,000 per month.....	1.00

Minimum meter rates per quarter in all districts outside of Hudson county (except those supplied from the Englewood High Service System):

		Fire Line Meters.	
		Old rate.	New rate.*
½-in. meter	\$2.50		
¾-in. "	3.00		
1-in. "	4.00	3-in. x 1 ½-in....	\$8.00 \$8.50
1 ½-in. "	5.00	3-in. x 2-in....	14.00
2-in. "	6.00	4-in. x 2-in....	16.00 17.50
3-in. "	12.00	6-in. x 2 in....	31.00
4-in. "	24.00	6-in. x 3-in....	35.00 37.50
6-in. "	48.00	8-in. x 3-in....	51.50
8-in. "	96.00	8-in. x 4 in....	55.00 60.00

* Increase due to change in style of meter.

Schedule of Rates—Hackensack Water Co.

Minimum meter rates per quarter in Hudson county:

		Fire Line Meters.	
		Old rate.	New rate.*
½-in. meter	..... \$1.00		
¾-in. "	..... 1.50		
1-in. "	..... 2.00	3-in. x 1½-in....	\$8.00 \$8.50
1½-in. "	..... 3.00	3-in. x 2-in....	14.00
2-in. "	..... 4.00	4-in. x 2-in....	16.00 17.50
3-in. "	..... 8.00	6-in. x 2-in....	31.00
4-in. "	..... 16.00	6-in. x 3-in....	35.00 37.50
6-in. "	..... 32.00	8-in. x 3-in....	51.50
8-in. "	..... 64.00	8-in. x 4-in....	55.00 60.00

* Increase due to change in style of meter.

Water for building new structures is furnished, so far as possible, through meters at the above meter rates. Where meters cannot be readily introduced, for the convenience of builders, the following flat rates apply:

With frontage less than 15 feet—

1 story.....	\$2.40	5 story.....	\$4.80
1½ "	2.80	6 "	5.20
2 "	3.20	7 "	5.60
2½ "	3.60	8 "	6.00
3 "	4.00	9 "	6.40
4 "	4.40	10 "	6.80

With frontage 15 feet and less than 20 feet—

1 story.....	\$2.80	5 story.....	\$5.20
1½ "	3.20	6 "	5.60
2 "	3.60	7 "	6.00
2½ "	4.00	8 "	6.40
3 "	4.40	9 "	6.80
4 "	4.80	10 "	7.20

With frontage 20 feet and under 25 feet—

1 story.....	\$3.20	5 story.....	\$6.40
1½ "	3.60	6 "	6.80
2 "	4.00	7 "	7.20
2½ "	4.40	8 "	7.60
3 "	5.20	9 "	8.00
4 "	6.00	10 "	8.40

With frontage 25 feet and under 30 feet—

1 story.....	\$3.60	5 story.....	\$7.20
1½ "	4.40	6 "	8.00
2 "	4.80	7 "	8.40
2½ "	5.20	8 "	9.20
3 "	6.00	9 "	10.00
4 "	6.80	10 "	10.80

Schedule of Rates—Hackensack Water Co.

With frontage 30 feet and under 40 feet—

1 story.....	\$4.40	5 story.....	\$8.00
1½ "	5.20	6 "	8.80
2 "	5.60	7 "	9.60
2½ "	6.00	8 "	10.40
3 "	6.80	9 "	11.20
4 "	7.60	10 "	12.00

With frontage 40 feet and under 50 feet—

1 story.....	\$5.20	5 story.....	\$8.80
1½ "	6.00	6 "	9.60
2 "	6.40	7 "	10.40
2½ "	6.80	8 "	11.20
3 "	7.60	9 "	12.00
4 "	8.40	10 "	12.80

Hydrant rates (except when furnished from Englewood high service system), \$15 per annum, except that in Hudson county the rate is \$5 per annum.

ENGLEWOOD HIGH SERVICE.

The rates for water supplied from the separate system of Englewood High Service are double the above-named meter rates, and double the above-named Bergen county minimum rates, except that where water is now supplied from that system to certain mains built as extensions of the Weehawken system, in Fort Lee and Coytesville, the rates for water supplied have not been doubled, but remain the same.

(a) The hydrant rate on water so supplied is \$35 per annum, the rate agreed upon when application for the installation of this system was made.

(b) Tapping rates. (Prices cover making taps and furnishing corporation cock, curb cock, stop cock, stop and waste cock, check valve, service box.)

½-in.....	\$11.00
¾-in.....	12.85
¾-in.....	14.00
1-in.....	16.50
1½-in.....	30.00 (only in 10-in. mains or over)
2-in.....	40.00 (only in 10-in. mains or over)

Schedule of Rates—Hackensack Water Co.

Patent connections. (Prices include making connections and furnishing sleeve and all connections.)

3 x 2.....	\$24.00	3.....	53.00
4 x 2.....	32.00	4.....	62.00
3.....	39.00	6.....	79.00
4.....	49.00	20 x 2.....	45.00
6 x 2.....	33.00	3.....	54.00
3.....	40.00	4.....	63.00
4.....	50.00	6.....	80.00
6.....	65.00	8.....	90.00
8 x 2.....	34.00	24 x 2.....	51.00
3.....	43.00	3.....	67.00
4.....	53.00	4.....	79.00
6.....	67.00	6.....	97.00
12 x 2.....	39.00	8.....	107.00
3.....	48.00	30 x 2.....	77.00
4.....	58.00	3.....	91.00
6.....	72.00	4.....	110.00
8.....	81.00	6.....	125.00
16 x 2.....	43.00	8.....	145.00

(c) For shutting off and turning on water \$1 is charged when the work is ordered by the consumer. When it is necessary to shut off non-payment in the few cases of this kind we have each quarter, a charge of \$5 is made to cover the expenses of shutting off, and the extra expense of collecting, such as notification of delinquency and extra trips of our collectors.

(d and e) Rates are seldom revised; our meter rates are practically those established when the company reorganized in 1880, while the flat rates made on less than 100 premises are those that we then found in effect on those premises.

(f) Fire houses, some fountains, hospitals, &c., receive a small amount of free water or have some allowance made on their bills.

HOBOKEN RATES.

The company supplies water to the City of Hoboken under a contract. The amount paid by the City of Hoboken for water is predicated on Hoboken City rates. These are rates of the City of Hoboken; they are not rates of the Hackensack Water Company.

The Hackensack Water Company receives from Hoboken 15 per cent. less than the rates adopted by the Board of Public Works of Jersey City, in April, 1881.

Schedule of Rates—Hackensack Water Co.

APPENDIX C.

Comparison of actual bills rendered to a domestic consumer under the new and old schedules.

QUARTERLY BILL.

Sarah D. Cole,
41 Myers Street,
Hackensack.

Number of Meter 537 Size of Meter $\frac{1}{2}$ -in.

NEW RATES.

Date of Reading.	Reading of meter, cu. ft.	Consumption during quarter, cu. ft.	Proportional service rate, \$/1,000 cu. ft.	Proportional service charge.
October, 1914.....	51,200	....	....	....
January, 1915.....	53,300	2,100	\$0.88	\$1.85
Total proportional service charge.....				\$1.85
Add fixed service charge for $\frac{1}{2}$ -inch meter.....				1.00
Total charge for quarter.....				\$2.85

PRESENT RATES.

Date of Reading.	Reading of meter, cu. ft.	Consumption during quarter, cu. ft.	Proportional service rate, \$/1,000 cu. ft.	Proportional service charge.
October, 1914.....	51,200	....	....	....
January, 1915.....	53,300	2,100	\$1.75	\$3.68
Total charge for quarter.....				\$3.68

Schedule of Rates—Hackensack Water Co.

APPENDIX D.

COMPARISON OF BILLS TO VARIOUS TYPICAL CUSTOMERS BASED ON PRESENT AND ON PROPOSED RATE SCHEDULES.

Customer.	Present Rate Schedule.			Proposed Rate Schedule.			
	Actual Consumption of Water by Customer During Year 1000 Cu. Ft.	Rate, \$/1000 Cu. Ft.	Amount of Bill to Customer.	Fixed Service Charge for 1/2" Meter.	Proportional		Amount of Bill to Customer = (5) + (7).
					Service Rate, \$/1000 Cu. Ft.	Charge, Amount = (2) × (6).	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
NEW MILFORD LOW SERVICE DISTRICT.							
Charles Graber, Hackensack.....	1.8	Minimum	\$10.00	\$4.00	.88	\$1.41	\$5.41
Sarah E. Highten, ".....	5.6	"	10.00	4.00	.88	4.93	14.93
Sarah D. Cohen, ".....	10.2	1.75	17.86	4.00	.88	8.92	21.92
R. J. Dougherty, Palisade Park.....	1.1	Minimum	10.00	4.00	.88	4.97	14.97
Mary Perrone, ".....	5.4	"	10.00	4.00	.88	4.75	14.75
Steinlaht Construction Company, Palisade Park.....	9.5	1.75	16.94	4.00	.88	8.38	21.38
John Gordon, Leonia.....	1.9	Minimum	10.00	4.00	.88	4.87	14.87
M. Mahnken, ".....	5.1	"	10.00	4.00	.88	4.49	14.49
Mrs. M. E. Robinson, Leonia.....	10.1	1.75	17.86	4.00	.88	8.99	21.99
H. D. Ward, Englewood.....	1.3	Minimum	10.00	4.00	.88	1.41	5.41
Katherine Glegold, Englewood.....	5.4	"	10.00	4.00	.88	4.75	14.75
Helen Hope Williams, ".....	9.9	1.75	17.83	4.00	.88	8.71	21.71
ENGLEWOOD HIGH SERVICE DISTRICT.							
W. H. Scott, Englewood Cliffs.....	1.0	Minimum	\$20.00	\$4.00	1.50	\$1.50	\$5.50
William Wunsch, ".....	5.0	"	20.00	4.00	1.50	7.50	11.50
Joseph W. Ebba, ".....	10.0	"	20.00	4.00	1.50	15.00	19.00
Frank G. Brunella, Fort Lee.....	1.7	"	20.00	4.00	1.50	2.55	6.55
Mari Wenzel, ".....	4.9	"	20.00	4.00	1.50	7.35	11.35
Peter Campomenosi, ".....	10.4	"	20.00	4.00	1.50	15.00	19.00
Isabella Hart, Englewood.....	1.2	"	20.00	4.00	1.50	1.80	5.80
John Englis, ".....	5.3	3.50	32.55	4.00	1.50	7.95	11.95
Martha L. Miller, ".....	9.3	2.80	48.14	4.00	1.50	13.95	17.95
Mrs. D. A. Jones, ".....	{ 16.6 1.6 18.2 }	3.50	58.74	4.00	1.50	27.80	31.80

Schedule of Rates—Hackensack Water Co.

APPENDIX E.

HACKENSACK WATER COMPANY.

COMPARISON OF PROPOSED AND PRESENT CHARGE TO MUNICIPALITIES FOR FIRE SERVICE BASED ON TOTAL REVENUE OF \$1,125,000.

Municipality.	PRESENT			PROPOSED		
	Number of hydrants.	Charge per hydrant.	Total present charge.	Proposed charge for fire service, exclusive of hydrant, in.-ft. basis.	Charge for hydrants at \$6.	Total fire charge, including hydrants.
<i>Hudson County—</i>						
Guttenberg	50	\$5	\$250	\$1,857	\$300	\$2,157
Hoboken	18	5	90	13,496	108	13,604
North Bergen	215	5	1,075	8,108	1,290	9,398
Secaucus	49	5	245	3,478	294	3,772
Town of Union	123	5	615	5,642	738	6,380
Weehawken	121	5	605	4,311	726	5,037
West Hoboken	210	5	1,050	10,293	1,260	11,553
West New York	164	5	820	5,819	984	6,803
Total (Hudson Co.),	950		4,750	53,004	5,700	58,704
<i>Bergen County—</i>						
Bergenfield	38	15	570	1,476	228	1,704
Bogota	14	15	210	502	84	586
Carlstadt	39	15	585	3,229	234	3,463
Cliffside Park	60	15	900	2,329	360	2,689
Closter	54	15	810	1,729	324	2,053
Cresskill	38	15	570	1,106	228	1,334
Delford	40	15	600	1,652	240	1,892
Demarest	28	15	420	1,055	168	1,223
Dumont	32	15	480	1,285	192	1,477
East Rutherford	71	15	1,065	2,142	426	2,568
Edgewater	70	35	1,105	2,331	420	2,751
		*15				
Emerson	18	15	270	669	108	777

* 2 @ \$35.00.

Schedule of Rates—Hackensack Water Co.

APPENDIX E—*Continued.*

Municipality.	PRESENT			PROPOSED		
	Number of hydrants.	Charge per hydrant.	Total present charge.	Proposed charge for fire service, exclusive of hydrant, in.-ft. basis.	Charge for hydrants at \$6.	Total fire charge, including hydrants.
<i>Bergen County (Cont'd.)</i>						
Englewood	172	35	3,700	6,271	1,032	7,303
Englewood Cliffs	12	15				
		35	420	1,072	72	1,144
Fairview	37	15	555	1,256	222	1,478
Fort Lee	62	35	2,170	3,049	372	3,421
Hackensack	255	15	3,825	8,001	1,530	9,531
Harrington Park	31	15	465	844	186	1,030
Hasbrouck Heights ...	53	15	795	2,082	318	2,400
Haworth	25	15	375	1,010	150	1,160
Hillsdale	40	15	600	1,141	240	1,381
Leonida	41	*35	655	1,342	246	1,588
		15				
Little Ferry	41	15	615	1,149	246	1,395
Lodi	2	15	30	132	12	144
Maywood	41	15	615	1,021	246	1,267
Moonachie	13	15	195	500	78	578
Norwood	38	15	570	1,095	228	1,323
Palisade Park	34	15	510	1,082	204	1,286
Palisade Township	20	15	300	698	120	818
Ridgefield	41	15	615	769	246	1,015
Ridgefield Park	87	15	1,305	2,893	522	3,415
Riverside	18	15	270	852	108	960
Rutherford	100	15	1,500	4,777	600	5,377
Teaneck	54	15	810	2,251	324	2,575
Tenaflly	74	15	1,110	2,408	444	2,852
Wallington	2	15	30	337	12	349
Westwood	60	15	900	1,960	360	2,320
Woodridge	17	15	255	1,192	102	1,294
Total (Bergen Co.)..	1,872	...	30,775	68,689	11,232	79,921
Grand total	2,822	...	\$35,525	\$121,693	\$16,932	\$138,625

* 2 @ \$35.00

° 56 @ \$35.00

Schedule of Rates—Hackensack Water Co.

APPENDIX F.

Municipality.	Present.		Proposed.	
	Number of Hydrants.	Average Spacing.	Required No. of Hydrants.	Average Spacing.
<i>Hudson County:</i>				
Guttenberg	50	500	50	500 ft. apart
Hoboken	18	....	....	....
North Bergen	215	715	307	"
Secaucus	49	1,000	99	"
Town of Union	123	600	149	"
Weehawken	121	570	136	"
West Hoboken	210	621	263	"
West New York	164	619	203	"
Total, Hudson Co.	950	636	1,209	500 ft. apart
<i>Bergen County:</i>				
Bergenfield	38	1,105	84	500 ft. apart
Bogota	14	929	26	"
Carlstadt	39	1,731	135	"
Cliffside Park	60	992	119	"
Closter	54	731	79	"
Cresskill	38	671	51	"
Delford	40	1,100	88	"
Demarest	28	807	45	"
Dumont	32	1,156	74	"
East Rutherford	71	683	97	"
Edgewater	70	544	76	"
Emerson	18	777	28	"
Englewood	172	1,009	347	"
Englewood Cliffs	12	1,958	47	"
Fairview	37	946	70	"
Fort Lee	62	1,258	156	"
Hackensack	255	808	412	"
Harrington Park	31	677	42	"
Hasbrouck Heights	53	896	95	"
Haworth	25	1,140	57	"
Hillsdale	40	700	56	"
Leonia	41	1,085	89	"
Little Ferry	41	585	48	"
Lodi	2	1,000	4	"
Maywood	41	707	58	"
Moonachie	13	731	19	"
Norwood	38	526	40	"
Palisade Park	34	926	63	"

Schedule of Rates—Hackensack Water Co.

APPENDIX F—*Continued.*

Municipality.	Present.		Proposed.	
	Number of Hydrants.	Average Spacing.	Required No. of Hydrants.	Average Spacing.
<i>Bergen County (Cont'd) :</i>				
Palisade Township	20	1,100	44	500 ft. apart
Ridgefield	41	646	53	"
Ridgefield Park	87	943	164	"
Riverside	18	1,361	49	"
Rutherford	100	1,225	245	"
Teaneck	54	1,194	129	"
Tenafly	74	838	124	"
Wallington	2	3,250	13	"
Westwood	60	867	104	"
Woodridge	17	1,676	57	"
Total, Bergen Co.	1,872	931	3,487	500 ft. apart
Grand Total	2,822	832	4,696	500 ft. apart

Western Union Telegraph Co.—Approval of Ordinance.

No. 428.

**IN THE MATTER OF THE APPLICATION OF THE WESTERN UNION
TELEGRAPH COMPANY FOR APPROVAL OF ORDINANCE OF THE
CITY OF TRENTON.**

Approval is asked of a supplement to an ordinance granting a telegraph company the right to use public streets.

1. The procedure prescribed in the "Limited Franchise Act" was not followed in passing the supplement which it is contended did not apply.

2. The Board construes the law as leaving the designation of a through line or system outside the scope of the "Limited Franchise Act," but as bringing the action of the municipality, as to a local line or system, within the operation of that act.

3. Some of the poles and wires now erected in the streets included in the supplemental ordinance are used in connection with local business.

4. The action of the municipality came within the operation of the "Limited Franchise Act." Approval is withheld.

H. B. Gill, for the Western Union Telegraph Company.

L. Edward Herrmann and *Grover C. Richman*, for the Board of Public Utility Commissioners.

Application is made to this Board for approval of an ordinance of the City of Trenton which purports to be a supplement to an ordinance entitled "An ordinance granting to the Western Union Telegraph Company, its successors and assigns, the right to construct and maintain lines, conduits and underground ways in, under and across the streets, alleys and public places of the City of Trenton, in the State of New Jersey, and to place and operate therein wires and cables necessary to carry on all branches of business in connection with the telegraph, ticker and messenger service and to erect and maintain distributing poles in alleys and other places," passed September 19th, 1913.

The enacting part is as follows:

"The Board of Commissioners of the City of Trenton do ordain:

1. That the authority conferred by Section 1 of the above entitled ordinance be and the same is hereby extended to include

Western Union Telegraph Co.—Approval of Ordinance.

West Hanover Street, from Chancery Street to Willow Street; Willow Street, from Chancery Street to Quarry Street; Quarry Street, from Willow Street to Calhoun Street, and Calhoun Street from Quarry Street to Calhoun Street Bridge, subject to all the terms, conditions and limitations contained in the ordinance to which this is a supplement. Passed October 18th, 1916."

Hearing was had upon the application April 17th, 1917, at Trenton; testimony was taken and a brief filed by the petitioner. The approval of the supplemental ordinance is asked under Chapter 195, Article III, Section 24, Laws of 1911, as follows:

"No privilege or franchise hereafter granted to any public utility as herein defined, by any political subdivision of this state, shall be valid until approved by said Board, such approval to be given when, after hearing, said Board determines that such privilege or franchise is necessary and proper for the public convenience and properly conserves the public interest and the Board shall have power, in so approving, to impose such conditions as to construction, equipment, maintenance, service or operation, as the public convenience and interest may reasonably require."

The question raised is whether the provisions of the statute commonly designated The Limited Franchise Act, Chapter 36, Laws 1906, and the acts supplemental thereto and amendatory thereof, should have been complied with in the enactment of the supplemental ordinance.

It appears that the procedure adopted in the enactment of the original ordinance to which the ordinance submitted is a supplement, was in compliance with the provisions of that act, and was approved by this Board. The purpose of the supplemental ordinance is not to change the use of or in any way alter the original grant but to add additional streets not included in the original ordinance, subject, however, to the terms, conditions and limitations thereof.

The petitioner contends that the provisions of the Limited Franchise Act have no application, and in obtaining the municipal consent, if such it be, compliance therewith is not requisite. The petitioner bases its contention mainly on Section 5263 of the Revised Statutes of the United States, which provides:

Western Union Telegraph Co.—Approval of Ordinance.

"Any telegraph company now organized, or which may hereafter be organized, under the laws of any state, shall have the right to construct, maintain, and operate lines of telegraph through and over any portion of the public domain of the United States, over and along any of the military or post roads of the United States which have been or may hereafter be declared such by law, and over, under or across the navigable streams or waters of the United States;" etc.

The petitioner alleges that it has in all respects complied with the provisions of said statute and now actually has its poles, cross-arms and wires in the streets covered by the supplemental ordinance and that the only effect of the ordinance passed September 19th, 1913, and the supplemental ordinance passed October 18th, 1916, is merely to permit the petitioner to place its wires now on the poles in the streets covered by the supplemental ordinance, in conduits either of the Delaware and Atlantic Telegraph Company or in its conduits constructed by the petitioner itself.

The Board, however, feels that the statute cited does not dispose of the question raised, but, rather that the determination depends upon the application of Section 8 of the Telegraph Act, as amended, Chapter 195, Laws 1909. The Act, in part, provides:

"Sec. 8. Any telegraph company organized under the laws of this or any other state or of the United States, or any company organized by virtue of this act, shall have full power to erect, construct, lay and maintain the necessary poles, wires, conduits and other fixtures for its lines, in, upon, along, over or under any of the public roads, streets and highways upon first obtaining the consent in writing of the owner of the soil to the erection of any such pole or poles, and through, across or under any of the waters within the limits of this State and upon, through or over any other land, subject to the right of the owner thereof, to the full compensation for the same; *provided, however, that no pole shall be erected, nor shall any conduit, wire, or other fixture be constructed or erected in, upon, along, over or under any of the public roads, streets, or highways of any municipality in this State, without first obtaining from the governing body of such municipality permission therefor by ordinance or resolution and a designation therein of the street or streets, road or roads, highway or highways, in, upon, along, over or under which the same shall be erected or constructed.*

* * * * *

"And provided also that nothing herein contained shall require permission by ordinance or resolution to be obtained from the governing body of any municipality to erect, construct, lay and maintain the necessary poles, wires, conduits and other fixtures which are to be used as a part of a through line or system as distinguished from a local line or system, but for all such through lines or system it shall be the duty of such governing body on written application therefor, being made as now required by law, to designate by resolution

Western Union Telegraph Co.—Approval of Ordinance.

the street or streets, road or roads, highway or highways in, upon, along, over or under which such poles, wires, conduits or other fixtures shall be constructed, laid or erected, etc. * * * *

"And provided also that such a through line or system as is herein mentioned shall be construed to be *used strictly for through business* which line or system shall in no event *be thereby used for local business* or in any case as a local line or system or as a part of any local line or system without having first obtained permission by ordinance or resolution for such local use or as such a local line or system as hereinbefore provided."

The Board, in re application of Eastern Telephone Company for approval of ordinance, Public Utility Reports, Vol. I, p. 733, and *Eastern Telephone Company vs. Board of Public Utility Commissioners*, 85 N. J. L. (56 Vr.) 511; 93 Atl. Rep. 1084, in speaking of Section 8 of the Telegraph Act as amended, used this language (at page 737):

"This is the construction we adopt:

"It seems to us to accord with the general legislative intent.

"As to the through line or system, it denies to the municipality the power to refuse to designate a route.

"As to the local line or system, it recognizes the possession of such power by the municipality.

"As to the through line or system, it requires designation by the municipality of a feasible route.

"As to the local line or system, it requires that where the municipality in its discretion makes designation of a route the route shall be feasible.

"It leaves the designation of a route by the municipality for a through line or system, outside the scope of the Limited Franchise Act, but brings the action of the municipality, as to a local line or system, within the operation of that act.

"Such construction likewise accords with the uniform practice of companies and municipalities with respect to grants of permission for the construction of local lines or systems since the enactment of the Limited Franchise Act. As in the case of the ordinances under consideration, the provisions of that act have been uniformly observed."

The construction adopted in this case was followed by the Board in the matter of the application of the New York Telephone Company for approval of a resolution granted by the Board of Freeholders of Middlesex County, New Jersey.

The inquiry, therefore, narrows to whether the grant or privilege embraced in the supplemental ordinance is to be *used strictly for through business* and *in no event to be thereafter used for local business* or as a part of any local line or system, or, whether it is to be *used for local business* or as part of a local line or system.

Western Union Telegraph Co.—Approval of Ordinance.

The petitioner proceeds on the assumption that the grant or privilege contained in the supplemental ordinance is to be used *strictly* for through business and *in no event* for local business, and if the supplemental ordinance has any effect at all it is merely a designation of the streets included in the supplemental ordinance.

It appears, however (testimony, pp. 21, 22, 23), that some, at least, of the poles and wires now erected in the streets included in the supplemental ordinance are used in connection with *local business*, the character of which is clock service. It may well be that the *local business* carried on in, over and along poles and wires erected in the streets included in the supplemental ordinance, is infinitesimal as compared with the through business, and also the local business as such may be different in character, that is to say, messenger service as compared with clock service. Yet the Legislature in defining a through line or system declared in definite terms that it should be "construed to be used strictly for through business" and "in no event be thereafter used for local business."

The Board cannot escape the conclusion that the Legislature, in using such definite terms as "strictly" and "in no event," had no intent other than that a through line or system should be used for through business to the exclusion of local business of every character and description, and, therefore, it follows that the grant or privilege contained in the supplemental ordinance as a fact used for local business, brings the action of the municipality in granting the privilege within the operation of the Limited Franchise Act.

The procedure adopted in the enactment of the supplemental ordinance being that which is merely incident to the formal passage thereof, should, therefore, be in accordance with the provisions of the Limited Franchise Act.

The Board, therefore, withholds its approval of the supplemental ordinance and the petition will be dismissed. An order will so enter.

Dated April 28th, 1917.

Lambertville Public Service Co.—Approval of Mortgage and Issue of Bonds.

ORDER.

This petition having been duly heard, and the Board having, on the date hereof, made and filed a report containing its findings of fact and conclusions thereon, which said report is hereby referred to and made a part hereof, the Board's approval of this petition is withheld and it is **HEREBY DISMISSED**.

Dated April 28th, 1917.

No. 429.

**LAMBERTVILLE PUBLIC SERVICE COMPANY PETITION FOR
APPROVAL OF A MORTGAGE AND THE ISSUE OF \$80,000 IN
BONDS.**

Application is made for approval of a mortgage and of the issue of \$80,000.00 par value of bonds.

1. Conservative financing would limit the amount of bonds to be outstanding in connection with the property now in existence at not exceeding \$60,000.00 and the Board considers it necessary in connection with the approval of the present issue that a plan be adopted which will result in amortizing the difference in value.

2. Upon filing a stipulation by which the company will agree to amortize, within the life of the issue of \$80,000.00 bonds, the amount of \$20,000.00, a certificate will be issued approving the mortgage and the issuance of bonds in accordance with the petition.

W. Holt Apgar, for the company.

This is the second application received from this company for approval of a mortgage and the issuance of bonds. The relations between the value of the property and the bonds to be issued are set forth in a report in the previous application in which the application was denied. It was indicated in the previous report, which was issued in July, 1916, that consideration could be given later to the creation of a mortgage and the issuance of bonds there-

Lambertville Public Service Co.—Approval of Mortgage and Issue of Bonds.

under. The second petition was heard by the Board at its meeting in Trenton on Tuesday, October 24th, 1916. The proposed mortgage has been examined and, after some changes suggested by the Board's counsel, is in such shape as to meet with the approval of the Board, and approval is therefore given to the creation of a mortgage in the amount of \$1,000,000.

In the previous application it was indicated that the Board would not give consideration to the creation of a new mortgage until a considerable amount of money had been expended in additions to the plant and distribution system of the company which should not be represented by the proceeds of bond issues. Examination of the property shows that the company has in good faith, carried out the plan involving a considerable amount of reconstruction and rebuilding and the service rendered by the company in Lambertville now appears to be reasonably adequate and satisfactory to the people of that town.

At the hearing on October 24th it was testified that it would be impracticable to finance the construction of the additions to this plant and system until the outstanding bonds could be refunded by an issue of bonds, secured by a mortgage of sufficient size to admit of further and additional issues thereunder.

The application now before the Board is for the approval of the issue of bonds in the amount of \$80,000, which are to be exchanged at par for the bonds now outstanding. This plan appears to be the only one which, under all the circumstances, presents a practical solution of the problem facing this company. In order that extensions and additions may be properly financed as they are required from time to time, the Board will approve the issue of bonds in the amount and for the purpose asked for in the pending application. In the testimony submitted in connection with the first application it was clearly shown that the value of the property is very little, if anything, in excess of the face value of the present bonds, leaving practically nothing to be represented by stock or free capital. The Board does not consider the position of the company in this respect a safe one in so far as assuring a continuance of service in the future is concerned. A very slight financial embarrassment might again result in a deterioration in

Erie R. R. Co. and N. Y., S. & W. R. R. Co.—Withdrawal of Trains.

service such as this company has already experienced in 1912, 1913 and 1914.

Conservative financing would limit the amount of bonds to be outstanding in connection with the property now in existence at not exceeding \$60,000, and the Board considers it necessary in connection with the approval of the present issue that a plan be adopted which will result in amortizing the difference in value between the amount of bonds now to be issued, \$80,000, and the figure of \$60,000 referred to above.

Upon the filing with the Board of a stipulation by which the company will agree to amortize, within the life of this issue of \$80,000 of bonds, the amount of \$20,000, a certificate will be issued, approving the mortgage and the issuance of bonds in accordance with the petition.

Dated May 7th, 1917.

No. 430.

IN THE MATTER OF THE WITHDRAWAL FROM SERVICE OF PASSENGER TRAINS BY THE ERIE RAILROAD COMPANY AND THE NEW YORK, SUSQUEHANNA AND WESTERN RAILROAD COMPANY.

1. It appears that the Committee of Railroad Managers, acting as a governmental agency, has suggested the reduction of passenger train service where necessary to facilitate the movement of freight.

2. In the present emergency mere convenience must give way before the imperative duty to serve the country in those respects which governmental agencies deem most essential. The Board and the public must rely in great measure upon the patriotism and good faith of the managers of roads to deal fairly in such matters, leaving to them, in the first instance, the determination of the methods to be adopted which will best serve the necessities of the emergency. Where subsequent events show the need of adjustment this Board may require such changes as are shown to be necessary.

H. A. Taylor, for the railroad company.

Joseph G. Wolber and *C. P. Gillen*, for the City of Newark.

Erie R. R. Co. and N. Y., S. & W. R. R. Co.—Withdrawal of Trains.

A. H. Radcliffe, Mayor, for the City of Paterson.

A. V. D. Snyder, for Paterson Chamber of Commerce.

A. O. Miller, for City of Passaic.

James G. Blauvelt, of Paterson, appeared as a protestant.

The Board of Public Utility Commissioners, having been advised of the Erie Railroad Company's intention of withdrawing, on May 13th, 1917, seventy-one trains now being operated by it in passenger service between stations in New Jersey, and of the intention of the New York, Susquehanna and Western Railroad Company, under the same control as the Erie Company, to withdraw six trains so operated, ordered on May 8th a hearing on the question whether the said companies, operating under the proposed schedules to be effective May 13th, would furnish safe, adequate and proper service.

No notice was given to the Board by the Erie Company of its intention to withdraw the trains. When the Board's attention was informally directed to the matter it at once directed its inspector to make inquiry of the company as to the facts. This was immediately done by him and a report confirming the rumor of the proposed withdrawal was received by the Board on the following day, May 8th, when the hearing was ordered. While the notice given of this hearing was shorter than is in accordance with the Board's usual practice, and shorter than is desirable for full opportunity to be afforded all interested parties to be heard, the responsibility for this rests solely upon the railroad company, which did not give the Board, until inquiry was made of it, information of its intention to withdraw the trains.

In its order calling a hearing, the Board stated that it, "while believing that no action should be taken in the interest of local traffic which would embarrass any railroad company subject to its jurisdiction, in responding to the desires of the government, and the performance of beneficial service to it, feels that before so drastic a change in the service is made as is proposed by the Erie Railroad Company, it should more clearly appear that service to

Erie R. R. Co. and N. Y., S. & W. R. R. Co.—Withdrawal of Trains.

the government will be afforded and public benefit derived from the withdrawal of trains proposed."

The Board stated further that in considering the "requirements of safe, adequate and proper service, the Board will give due consideration to the abnormal conditions now existing and will afford opportunity to the Erie Railroad Company to submit to the Board testimony in support of its contention that the proposed withdrawal of trains is a necessary and proper measure in the interest of the public welfare."

If it appeared that the passenger train service now in effect is in excess of the reasonable needs of the traveling public, proof would be unnecessary of the economic advantage of the discontinuance of the superfluous service. The existence of service in excess of reasonable requirements would establish proof of economic waste. When, however, a service has been long established, when that service is not shown to be in excess of reasonable requirements, but on the contrary appears to be essential to the maintenance of a reasonable standard, it seems to the Board that something more is needed than the assertion by the carrier that its discontinuance is desirable as a patriotic and proper service to the government engaged in war.

The Board is a state body vested by the laws of the State with authority and charged with responsibility to require railroad companies operating in the State to furnish safe, adequate and proper service.

Citizens of the State believing that such service is not afforded are entitled to hearings before the Board. It is probable that the exigencies of the war will call for the diversion of railroad facilities from their normal use to meet the requirements of the government. In this posture of affairs it is highly desirable that there should be co-operation between the railroads, the people of the State and the Commission. If the public should be subjected to inconvenience and financial loss because of the withdrawal of transportation facilities to which they had been accustomed, and which, under normal conditions, unquestionably should be furnished, and if no reasonable explanation should be given of the necessity for the withdrawals, the Board, in all probability, would be flooded with complaints directed against the deprivation of service in particular instances.

Erie R. R. Co. and N. Y., S. & W. R. R. Co.—Withdrawal of Trains.

Those complaining would be entitled under the laws of the State to hearings, at which the time of operating officials of the roads needed for other duties would be used in attempts to justify, in the specific cases under consideration, the action of the railroad company. The Board, therefore, suggests not only to the railroad company, which is a party to this proceeding, but to the railroads in general subject to the Board's jurisdiction, the following as a desirable course of procedure. If, in the judgment of the management of any railroad company, any equipment now or hereafter in use in normal traffic in this State may be employed by or for the government in the transportation of men or supplies such equipment be offered to the government. If accepted by the government and a curtailment of local facilities is deemed necessary, because of the government use, the Board to be advised of the nature of the offer and acceptance and the extent of abridgement of service regarded as necessary. If not upon the initiation of the railroads, but upon requisition by the government, fuel, locomotives, cars, or men experienced in the operation of railroad trains, should be required in the government service, and supplying these will necessitate discontinuance of certain transportation facilities in the State, the Board be advised of the facilities to be discontinued, and so far as the government deems it advisable to impart the information of the extent of the facilities demanded.

In possession of evidence showing that service has been necessarily abridged to meet the government's need, the Board, in many cases, could explain, without requiring the attendance of operating officials at hearings, to the satisfaction of those complaining of financial loss or inconvenience, due to inadequate service, why service to which ordinarily they would be entitled could not be required. In order that the Board's position in this matter may be known to the carriers, copies of this report will be sent to the railroads operating in this State.

At the hearing in the particular cases under consideration the Vice-President and General Manager of the respondent companies testified that the proposed withdrawals were solely temporary and made necessary by the existing difficulty in securing a sufficient supply of coal and in getting the skilled labor necessary to avoid delay in making needed repairs to freight locomotives in order to

Erie R. R. Co. and N. Y., S. & W. R. R. Co.—Withdrawal of Trains.

obtain the greatest efficiency therefrom. It appears that the roads are being taxed to meet the requirements of freight service. He further stated that it is not the purpose of the companies to extend the curtailment of passenger service beyond the period of unusual operating conditions; that the proposed withdrawals would not be put in effect except to meet an emergency, and the operation of the trains withdrawn will be resumed when the emergency ceases to exist.

He further testified that the situation in which the companies find themselves with respect to securing coal is most critical. We are much impressed by the plea of coal shortage and the necessity for conserving the coal supply by these companies.

It further appears that the Committee of Railroad Managers, acting as a governmental agency, has suggested the reduction of passenger service where necessary to facilitate the movement of freight. It is an undoubted fact, as testified, that the respondent companies are unable to promptly move the freight presented for transportation, and that an embargo exists as to some classes of freight. In the present emergency mere convenience must give way before the imperative duty to serve the country in those respects which governmental agencies deem most essential. This should be done with as little disarrangement of existing conditions as is consistent with service to the whole country. This Board and the public must rely in great measure upon the patriotism and good faith of the managers of roads to deal fairly in such matters, leaving to them, in the first instance, the determination of the methods to be adopted which will best serve the necessities of the emergency. Where subsequent events show the need of adjustment, this Board may require such changes as are shown to be necessary.

Representatives of municipalities and trade bodies, as well as individuals, appeared at the hearing and made objection to the withdrawal of certain trains, and showed the results of withdrawing such trains. In each instance where it was shown that the withdrawal of a particular train would result in serious public detriment and its continuance was recommended by the Board the respondents agreed to retain such trains in service, or to so arrange the proposed schedule as to meet the complaint. At the conclusion

Hackensack Water Co.—Application of Rates—West Hoboken.

of the hearing there was very general acquiescence, because of the emergency shown, in the schedules now proposed to be put in effect.

In view of the developments at the hearing the Board will permit the proposed schedules as amended by the stipulation with respect to particular trains, as above mentioned, to go into effect.

Withdrawal of a number of trains naturally will increase the travel on those remaining. The Board will expect that, where necessary, cars will be added to these trains to accommodate passengers.

If it should appear that operation under the new schedules results in a disadvantage to those dependent on the companies for passenger train service, which disadvantage is not counterbalanced by a broader and more important service in a critical period to the government and general public, the company will be expected, and, if necessary, required to modify its schedules so as to provide such additional service as should be reasonably afforded.

Dated May 11th, 1917.

No. 431.

IN THE MATTER OF THE APPLICATION OF THE RATES OF THE
HACKENSACK WATER COMPANY TO CONSUMERS IN WEST
HOBOKEN.

John J. Fallon, for West Hoboken.

W. M. Wherry, for the company.

The Town of West Hoboken has made application for a determination by the Board that the rates which have been established as just and reasonable to be charged by the Hackensack Water Company shall not be applied to the municipality and citizens of the Town of West Hoboken, because the provisions of an agreement between the Township of West Hoboken Aqueduct

New Jersey Water Service Co.—Petition for Approval of Sale of Stock.

Company, the predecessor of Hackensack Water Company, and the Township of West Hoboken, dated September 23d, 1881, cover the rates to be charged therein.

In view of the lack of satisfactory evidence upon which to base a conclusion as to the effect of the agreement referred to, the Board does not now determine the validity of the agreement as to the application of rates in West Hoboken. Upon proper application and the formal presentation of the proofs necessary for a determination, the Board will hold a hearing and determine the questions presented.

Dated May 16th, 1917.

No. 432.

NEW JERSEY WATER SERVICE COMPANY PETITION FOR APPROVAL OF SALE OF \$25,300 PAR VALUE OF TREASURY STOCK.

A water company, formed through the merger and consolidation of two companies, acquired \$25,337.50 par value of the capital stock of one of the companies. Approval was given by the Board to an issue of first and refunding mortgage bonds, of which part were to be used in capitalizing construction work amounting to \$38,210.84.

1. The application of the proceeds from the sale of the acquired stock to the payment of a dividend declared out of surplus will result under the circumstances in capitalizing, through an issue of stock, expenditures for extensions made out of earnings and is therefore a proper purpose for which stock may be issued.

2. Upon condition that the proceeds from the sale of bonds to yield \$25,300 be used solely for the liquidation of floating indebtedness representing uncanceled plant expenditures at the time of the consolidation, approval will be given to the sale of \$25,300 par value of remaining treasury stock for the purpose of paying a dividend to that amount to be declared out of accumulated surplus.

Theodore J. Grayson, for the company.

This application is for the approval of the sale, for cash, at par, of 253 shares of treasury stock, which were acquired by the com-

New Jersey Water Service Co.—Petition for Approval of Sale of Stock.

pany upon its formation through the merger and consolidation of the Haddonfield Water Company and the United Water Company, \$25,337.50 par value of the former's capital stock having been owned and held by the latter, which was exchanged for a like amount of the capital stock of the consolidated company and thus came into the treasury of the New Jersey Water Service Company when it took over the assets of the two constituent companies.

In the Board's certificate of April 22d, 1913, approving the issuance of \$63,500 par value of capital stock of the New Jersey Water Service Company, in exchange at par for the outstanding capital stock of its above two constituent companies, attention was directed to the fact that "there will come into the treasury of 'The New Jersey Water Service Company' shares of its capital stock of the par value of twenty-five thousand three hundred thirty-seven dollars and fifty cents (\$25,337.50), and that the sale or other disposition of these shares will require the approval of the Board under P. L. 1911, chapter 195, section 18 (h)."

The sale of \$37.50 of this stock has already been approved by the Board, and its approval is now sought for the sale of the remaining \$25,300.00.

At the hearing on the application for the approval of the issuance of the above \$63,500 capital stock, three ways were suggested to the company for the disposal of the amount thereof coming into its treasury: (1) that all shares of such stock be cancelled; (2) that they be sold for not less than \$17,500 in cash, which was the amount originally paid for the stock by United Water Company, and the proceeds used to pay off an equal amount of floating indebtedness incurred for construction purposes prior to the consolidation, or (3) for the purpose of making additions and betterments to the company's plant and equipment subsequently to that date.

It is for the latter purpose that it is proposed indirectly to use the proceeds from the contemplated sale of the \$25,300 capital stock remaining in the treasury of the company, inasmuch as the payment of a dividend, declared out of the surplus, to the extent of the proceeds from the sale of this stock, which amount of surplus has been invested in additions to plant and equipment made since the date of the consolidation is, in the final result, equiva-

New Jersey Water Service Co.—Petition for Approval of Sale of Stock.

lent to having paid out in dividends the cash derived from surplus earnings during the period, and having made the plant extensions out of the proceeds from the sale of capital stock.

The application of the proceeds from the sale of stock to the payment of a dividend declared out of surplus, under the circumstances above set forth, will result in capitalizing, through an issue of stock, expenditures for extensions made out of earnings, and is therefore a proper purpose for which stock may be issued.

Under date of November 14th, 1916, the Board's approval was granted to an issue of \$218,100 par value of the New Jersey Water Service Company's first and refunding mortgage bonds, part of which were to be used in capitalizing construction work done during the years 1913, 1914 and 1915, amounting to \$38,210.84. The greater part of this represents invested surplus. No bonds have yet been issued for refunding any part of these expenditures, and if the latter should be capitalized to the extent of \$25,300 through the sale of treasury stock, as many bonds as would be required to yield this amount of money could no longer be issued for the specific purpose for which the Board's approval of their issuance was granted. The question, therefore, naturally arises whether the Board should not first withdraw its approval of the issuance of this amount of bonds, before approving the sale of treasury stock for virtually the same purpose.

As above stated, there was one other way suggested to the company at the hearing on the application for the approval of the merger and consolidation resulting in its formation, in which could be used the proceeds from the sale of its treasury stock, namely, to refund an equal amount of floating indebtedness outstanding on that date and representing uncanceled plant expenditures. This indebtedness has not yet been liquidated through the proceeds from sale of stocks, bonds, or other evidences of indebtedness, the issuance of which requires the Board's approval, in which case there could be issued at the present time for proper capital purposes more than \$30,000 par value of securities in addition to those which the Board already has granted the company permission to issue.

Inasmuch as the liquidation of floating indebtedness, incurred for construction work done prior to a given date, through an issue

Jersey Central Traction Co.—Approval of Agreement of Merger.

of bonds, and the capitalizing of extensions made after such time through the sale of stock is in the final result equivalent to capitalizing the latter by issuing bonds in payment therefor and to refunding the former through an issue of stock, the application to the latter purpose of the proceeds of as many bonds as are required to yield \$25,300, therefore, may be regarded under the above circumstances, as being used indirectly to capitalize that amount of construction work done between January 1st, 1913, and December 31st, 1915, the specific purpose for which the issue of this amount of bonds has heretofore been approved. Accordingly, with the understanding, and upon the condition, that the proceeds from the issue of said amount of bonds be used solely for the liquidation of floating indebtedness representing uncanceled plant expenditures at the time of the consolidation, the Board will approve the sale of the remaining \$25,300 par value of the company's treasury stock, for the purpose of paying a dividend of that amount to be declared out of the accumulated surplus of the past four years, practically all of which has been invested in additions and betterments to the company's water service property.

Dated May 16th, 1917.

No. 433.

IN THE MATTER OF THE PETITION OF THE JERSEY CENTRAL
TRACTION COMPANY FOR APPROVAL OF A PROPOSED AGREEMENT OF MERGER AND CONSOLIDATION.

H. B. Gill and C. L. S. Tingley, for the company.

The Jersey Central Traction Company was formed by consolidation of a number of companies which were organized under the Street Railway Act. The Jersey Central Traction Company, under date of August 5th, 1904, duly accepted the provisions of what is generally called the Traction Act. The Jersey Central Traction Company was authorized to do business for a period of

 Jersey Central Traction Co.—Approval of Agreement of Merger.

fifty years and has outstanding at the present time the following securities:

Common capital stock.....	\$1,500,000
First mortgage bonds.....	230,000
Second mortgage bonds.....	1,270,000
Third mortgage bonds.....	340,000

A total security issue of.....	\$3,340,000
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The Central Jersey Traction Company was organized February 1st, 1917, and has outstanding capital stock to the amount of \$25,000.

The Central Jersey Traction Company has outstanding certain obligations amounting to \$25,000, which are held by the Jersey Central Traction Company and in the consolidation the property now held by Central Jersey Traction Company will be transferred to the Jersey Central Traction Company and the claim of the Jersey Central Traction Company against the Central Jersey Traction Company will be cancelled, so that the capital stock of the Central Jersey Traction Company will be cancelled as a result of the consolidation of the two companies.

The consolidation of the two companies, forming the new Jersey Central Traction Company, will not result in the issuance of an amount of securities equivalent to those now outstanding, for the following reasons:

1. The Jersey Central Traction Company is planning to sell its power house, transmission lines and sub-stations to the Monmouth Lighting Company, and

2. The securities to be issued by the new Jersey Central Traction Company will have a proper relation to the value of the property remaining in the ownership of the Jersey Central Traction Company.

After due hearing and full consideration of all of the facts in the case, the Board will give its approval to the consolidation of the Jersey Central Traction Company and the Central Jersey Traction Company, forming the Jersey Central Traction Company, the terms of the consolidation being that the capital stock of the Central Jersey Traction Company will be duly cancelled as a result of the consolidation.

Dated May 21st, 1917.

Jersey Central Traction Co.—Application to Sell Real Estate, etc.

No. 434.**IN THE MATTER OF THE APPLICATION OF THE JERSEY CENTRAL
TRACTION COMPANY FOR LEAVE TO SELL CERTAIN REAL
ESTATE AND PERSONAL PROPERTY.**

H. B. Gill and C. L. S. Tingley, for the company.

The Jersey Central Traction Company has been operating a street railway property located in Monmouth County and operating lines between South Amboy, Keyport, Red Bank and Atlantic Highlands.

The company is vested with the ownership, in addition to its lines of street railway, of a power station, electric transmission lines and sub-stations. It also owns the majority of the capital stock and bonds of the Middlesex and Monmouth Electric Light, Heat and Power Company. In addition to the bonds and stock it owns also certain construction debts of the lighting company, due to the fact that the funds for additions and extensions of the lighting company have been provided by the traction company through the issuance of traction company bonds. In order to conform to the general wishes of the Commission, by divorcing, so far as possible, the traction from the lighting business, the traction company proposes to sell to the Monmouth Lighting Company the power station, transmission lines and sub-stations. It is also proposed to sell the stocks, bonds and construction debts of the Middlesex and Monmouth Electric Light, Heat and Power Company. The properties to be sold have all been appraised and the sale prices correspond to the value set up for the respective properties in the appraisal.

The proceeds of these sales are to be used to retire a portion of the outstanding bonds and some of the outstanding stock of the Jersey Central Traction Company. The property to be sold by the Jersey Central Traction Company to the Monmouth Lighting Company consists of:

 Jersey Central Traction Co.—Application to Sell Real Estate, etc.

The power station, sub-station, high tension lines, appraised at....	\$359,600
The stock and bonds of the Middlesex and Monmouth Electric Light, Heat and Power Company.....	144,200
Construction debts of the Middlesex and Monmouth Electric Light, Heat and Power Company.....	197,400
Total value to be transferred.....	<hr/> \$701,200

For the property thus acquired, the Monmouth Lighting Company is to pay the Jersey Central Traction Company \$440,000 in Monmouth Lighting Company first mortgage bonds, issued at par, and \$63,800 in promissory notes.

The \$63,800 in promissory notes held by the Jersey Central Traction Company and the \$197,400 construction debts owned by the traction company, will be later liquidated through the issuance of stock by the lighting company. The total debt against the lighting company, held by the traction company, amounts to \$261,200. These debts will be liquidated by the lighting company in the equivalent of cash at par.

Jersey Central Traction Company, in this petition, prays for permission to sell its power plant, transmission lines and substations at the appraised value of \$359,600, for cash or its equivalent, and prays for permission also to sell bonds amounting to \$100,000 and stock amounting to \$44,200, also for cash at par; the bonds and stock having been issued by the Middlesex and Monmouth Electric Light, Heat and Power Company.

After due hearing and full consideration being given to the testimony submitted, the Board will approve the sale by the Jersey Central Traction Company of the property in accordance with the petition. The proceeds to be used by the traction company in the retirement of outstanding securities, this resulting by the issuance of only a limited amount of stock and bonds in connection with the consolidation of the Jersey Central and Central Jersey Traction Companies.

Dated May 21st, 1917.

Monmouth Lighting Co.—Application to Issue Stock.

No. 435.

IN THE MATTER OF THE APPLICATION OF THE MONMOUTH LIGHTING COMPANY FOR AUTHORITY TO ISSUE CAPITAL STOCK IN THE PAR VALUE OF \$261,000 AND BONDS IN THE FACE VALUE OF \$440,000.

H. B. Gill and C. L. S. Tingley, for the company.

Monmouth Lighting Company is a corporation formed by consolidation of the Monmouth Lighting Company and the Middlesex and Monmouth Electric Light, Heat and Power Company, which consolidation is approved by the Commission in a report bearing even date herewith.

In the report with regard to the consolidation, it is stated that the Monmouth Lighting Company would issue its securities for two general purposes: to take over the generating station, the transmission lines and sub-stations formerly the property of the Jersey Central Traction Company, and for taking over the property and construction debts of the Middlesex and Monmouth Electric Light, Heat and Power Company. The property acquired by the new Monmouth Lighting Company, in addition to that which it already owned, has been given a value of \$701,200. In payment for all of this property the Monmouth Lighting Company proposes to issue stock in the par value of \$261,200 and bonds in the par value of \$440,000, making a total of \$701,200.

The total securities outstanding, after the issuance of those referred to in this report, will be as follows:

Stock now outstanding.....	\$38,000
New stock	267,000
Total stock	\$305,000
Bonds now outstanding.....	\$121,000
Bonds to be issued.....	440,000
Total bonds	\$561,000

Monmouth Lighting Co. and Middlesex and Monmouth Electric Light, Heat and Power Co.—Merger and Consolidation.

By the issuance of the securities referred to in this report the Monmouth Lighting Company will obtain a clear title to all property transferred to it from the Jersey Central Traction Company and from the Middlesex and Monmouth Electric Light, Heat and Power Company, and the only uncapitalized construction debts will be such minor debts as may be found on the books of the Monmouth Lighting Company prior to the consolidation. The petition should be amended to pray for the order herein allowed.

After consideration of all the testimony concerning the values of the property taken over in the consolidation forming the new Monmouth Lighting Company, the Board will approve the issuance of stock amounting to \$267,000 and bonds in the par value of \$440,000.

Dated May 21st, 1917.

No. 436.

**IN THE MATTER OF THE PETITION OF THE MONMOUTH LIGHTING
COMPANY AND MIDDLESEX AND MONMOUTH ELECTRIC LIGHT,
HEAT AND POWER COMPANY FOR APPROVAL OF MERGER AND
CONSOLIDATION.**

After full consideration of all the matters involved the Board is of the opinion that the proposed consolidation is in line with good policy and at the present time is the best solution of a complicated situation, as the final result will be to divorce the electric lighting business from the traction business and to put the control of the generating plant and the substations with the lighting company, where they ought to be.

H. B. Gill and C. L. S. Tingley, for the companies.

The Monmouth Lighting Company was formed by consolidation of the Monmouth Lighting Company and the Farmingdale Lighting Company, said consolidation having been approved by the Commission in January, 1916. The Monmouth Lighting Company has, at the present time, an authorized capital stock of

Monmouth Lighting Co. and Middlesex and Monmouth Electric Light, Heat and Power Co.—Merger and Consolidation.

\$500,000, of which \$38,000 is issued and outstanding. It has an authorized bonded indebtedness of \$3,000,000, of which bonds in the amount of \$121,000 have been duly issued and are now outstanding.

Middlesex and Monmouth Electric Light, Heat and Power Company is a corporation organized for the purpose of supplying electric light, heat and power in Monmouth County, New Jersey. It has an authorized capital stock of \$50,000, all of which is issued and outstanding. It has an authorized bonded indebtedness of \$100,000, all of which has been issued and is outstanding.

The corporation first named owns a small generating plant in Englishtown and owns and operates a distribution system for electric lighting and power in Englishtown, Freehold, Farmingdale and vicinity. Middlesex and Monmouth Electric Light, Heat and Power Company owns and operates a distribution system for electric light and power in the whole northern end of Monmouth County, extending from South Amboy eastward to the Highlands and southward as far as Freehold, where it supplies electrical energy to the Monmouth Lighting Company.

The Monmouth Lighting Company is under contract to purchase from the Jersey Central Traction Company the powerhouse, transmission lines and sub-stations now being operated by the Traction Company at the appraised value of \$359,600.

The petition now before the Board is for the approval of the consolidation of the Monmouth Lighting Company and of the Middlesex and Monmouth Electric Light, Heat and Power Company. The system of the Monmouth Lighting Company has all been constructed under the supervision and jurisdiction of the Commission and the securities now outstanding have all been approved by the Commission from time to time as they were issued. The system of the Middlesex and Monmouth Electric Light, Heat and Power Company was constructed before this Commission came into existence and all of this company's securities were so issued. This property has been appraised. The cost to reproduce new, as of November 1st, 1916, is given as \$707,656, and the present depreciated value as \$592,807.

In the agreement of consolidation it is proposed to exchange

Monmouth Lighting Co. and Middlesex and Monmouth Electric Light, Heat and Power Co.—Merger and Consolidation.

for the stock of the Monmouth Lighting Company an amount of stock equal to that now outstanding. For the securities and property of the Middlesex and Monmouth Electric Light, Heat and Power Company, the newly consolidated company will issue a sufficient amount of stocks and bonds to take up all of the securities now outstanding and all of the construction debts.

The Monmouth Lighting Company now has a mortgage in the amount of \$3,000,000 of which bonds in the face value of \$121,000 have been issued. These bonds were issued at 80 so that the value of the property represented by them is \$96,800 and the bond discount not yet amortized amounts to \$24,200. Additional bonds under this mortgage will be issued to liquidate the debts of the Middlesex and Monmouth Electric Light, Heat and Power Company.

The cost of the properties of the newly formed Monmouth Lighting Company will be as follows, not taking into account recent additions:

Monmouth Lighting Company.....	\$134,800
Middlesex and Monmouth Electric Light, Heat and Power Company,	707,656
	<hr/>
Total value new.....	\$842,456

Representing the above value the securities issued will be as follows:

Capital Stock	\$305,000
Bonds (now outstanding).....	121,000
Bonds (to be issued).....	440,000
	<hr/>
Total	\$866,000

Of this total, certain items will be amortized during the term of the bonds; they are as follows:

Unamortized debt discount and expense in connection with old Monmouth Lighting Company.....	\$27,650
Suspense account (old Monmouth Lighting Company)...	3,665
	<hr/>
Total	31,315

Deducting this amount from the face value of the securities of \$866,000 leaves

\$834,685

Jersey Central Traction Co.—Approval of Lease.

which is less than the value new of the property, but is probably in excess of its present depreciated value.

After full consideration of all the matters involved the Board is of the opinion that the proposed consolidation is in line with good policy and at the present time is the best solution of this complicated situation, as the final result will be to divorce the electric lighting business from the traction business and will put the control of the generating plant and the sub-stations in the hands of the lighting company, where they ought to be.

An order will be entered approving the consolidation in accordance with the petition.

Dated May 21st, 1917.

No. 437.

IN THE MATTER OF THE PETITION OF THE JERSEY CENTRAL TRACTION COMPANY FOR APPROVAL OF LEASE TO CENTRAL JERSEY TRACTION COMPANY.

H. B. Gill and *C. L. S. Tingley*, for the companies.

The Jersey Central Traction Company was formed by consolidation of several street railway companies, organized under the Street Railway Act. In August, 1904, it accepted the provisions of the Traction Act. The Jersey Central Traction Company was organized for a period of fifty years, terminating March 31st, 1941. In reorganizing the finances of the company a new mortgage is to be created, which does not mature until 1947.

The company's officials are of the opinion that there is no statutory authority by which the life of the company can be extended and they have, therefore, resorted to the plan of organizing a new company known as the Central Jersey Traction Company and to later consolidate the Central Jersey Traction Company with the Jersey Central Traction Company.

The Central Jersey Traction Company was organized February

Jersey Central Traction Co.—Approval of Mortgage and Issuance of Bonds.

1st, 1917, with an authorized capital stock of \$900,000, of which \$25,000 is issued for cash. The amount of \$25,000 was deposited with the State Treasurer under date of February 1st, 1917, in accordance with the terms of the Street Railway Act.

The Central Jersey Traction Company has an authorized existence for a period of one hundred years, terminating February 1st, 2017.

In the petition before the Board the Jersey Central Traction Company asks approval of a lease by which all of the franchise and property of the Jersey Central Traction Company is to be leased to Central Jersey Traction Company, and by which certain personal property, materials and supplies of a value of at least \$25,000 are sold and transferred to the Central Jersey Traction Company, all as set forth in schedule attached to the company's application and valued approximately at \$25,532.

By this arrangement the new company becomes lessee of all of the franchises and property of the Jersey Central Company and the owner of the tools, materials and supplies necessary for the operation of the property leased.

A certificate will issue, authorizing the execution of the lease and the sale of the property as prayed for in the petition, the proceeds received by the Jersey Central Traction Company to be credited to the proper capital accounts.

Dated May 21st, 1917.

No. 438.

IN THE MATTER OF THE APPLICATION OF THE JERSEY CENTRAL
TRACTION COMPANY FOR APPROVAL OF A MORTGAGE AND
THE ISSUANCE OF BONDS.

The petitioner asks for approval of a mortgage to the amount of \$5,000,000 and issuance of bonds thereunder in the par value of \$800,000; also for the approval of an issue of preferred stock in the amount of \$600,000 and common stock in the amount of \$1,000,000 or such lesser amount as the Board may consider proper.

Jersey Central Traction Co.—Approval of Mortgage and Issuance of Bonds.

For the purpose before it, the Board cannot approve the use of the excessive prices now being paid for various materials and supplies. Approval is given to the mortgage of the issuance of bonds and preferred stock as asked and of common stock in the amount of \$531,400.

H. B. Gill and *C. L. S. Tingley*; for the company.

The Jersey Central Traction Company, referred to in this report, was formed by consolidation of the Jersey Central Traction Company with the Central Jersey Traction Company, which consolidation was approved by the Commission in a report bearing even date herewith.

The Jersey Central Traction Company has outstanding three mortgages, as is fully set forth in certificates of this Board, dated March 24th, 1914, and February 2d, 1915, and in the applications which led to the issuance of the certificates referred to.

At the present time there is outstanding capital stock in the amount of \$1,500,000. Under the first mortgage, bearing date November 1st, 1901, bonds to the amount of \$230,000 are issued and outstanding. Under the second mortgage, dated December 1st, 1904, there is outstanding \$1,270,000. Under the third mortgage, dated March 2d, 1914, there is outstanding \$340,000 bonds, making a total of bonds outstanding of \$1,840,000, or a total present capitalization of \$3,340,000.

The property covered by the mortgages referred to consists of a complete electrical railway with lines operating between Perth Amboy, Keyport, Red Bank and Atlantic Highlands, including, also, the power station, sub-stations and transmission lines, the sale of which to the Monmouth Lighting Company, has been approved in a report of this Board bearing date even herewith. The mortgages cover also the stocks and bonds and construction debts of the Middlesex and Monmouth Electric Light, Heat and Power Company. This latter company is to be consolidated with the Monmouth Lighting Company, as is more fully set out in a report of this Board bearing date even with this report.

The petition now before the Board asks for approval of a mortgage in the amount of \$5,000,000 and the issuance of bonds thereunder in the par value of \$800,000. The petition also asks the

Jersey Central Traction Co.—Approval of Mortgage and Issuance of Bonds.

approval for an issue of preferred stock in the amount of \$600,000 and common stock in the amount of \$1,000,000 or such lesser amount as the Board may consider proper.

The testimony with regard to the value of the traction property is somewhat confusing and not wholly satisfactory. The total capitalization at the present time is \$3,340,000. This capitalization is practically the same in total amount as it was in 1914. Since that time, however, considerable additions have been made to both the electric lighting and street railway properties, the additions to the street railway alone amounting in value to approximately \$160,000. The valuation of the traction property was gone into to some extent in 1914, when application was made for approval of a proposed mortgage in the amount of \$5,000,000 referred to above as the third mortgage, but referred to in the certificate dated March 24th, 1914, as "a general refunding, improvement and extension mortgage." At the time the creation of this mortgage and the issuance of bonds thereunder were under consideration by the Commission, reports were submitted by the company, giving information with regard to valuation, which information included both the traction and lighting properties. C. W. Humphreys, a consulting engineer of St. Louis, estimated that the value of the property in April, 1913, was \$2,290,000. W. A. Heindel, of Wilmington, Delaware, estimated that the value of the property was \$2,185,000. These two estimates are close. Both appraisers stated that, in their opinion, the book cost of the property was far in excess of the appraised value, due to the fact that some portions of the system had been rebuilt several times. This may account, in some measure, for the excess of capitalization over the appraised value.

Since these appraisals were made in 1913, additions to the property up to the end of 1915 amount to \$160,789. Adding this amount to each of the appraisals referred to, give a total for Humphreys of \$2,450,789, and for Heindel a total of \$2,345,789. The average of these figures is \$2,398,289, which would represent the value of the entire property at the end of 1915. To obtain the value of the traction property as of that date, there should be deducted the value of the electric light property as of 1915. Due

Jersey Central Traction Co.—Approval of Mortgage and Issuance of Bonds.

to the fact that the appraisal of the electric lighting property separately, is as of November, 1916, it is somewhat difficult to obtain this figure. The electric lighting property in November, 1916, is appraised at \$580,085, which would leave as the value of the traction property, separately, \$1,818,204. To this must be added, however, the cost of the Keansburg extension, amounting to \$86,789, and additions and betterments, consisting principally of some new cars provided in 1913 and 1914, of \$56,236, making a total value for the traction property as of the present time of approximately \$1,961,229.

As a further check on this value, H. P. Megargee testified at the hearing on April 10th, 1917, that he had made an appraisal of the property, based upon the inventory of Ford, Bacon and Davis. This inventory, however, was made in January, 1915, and does not include the Keansburg extension, which cost \$86,789. Mr. Megargee testified that the value of the physical property is \$1,834,648, to which he added 30% for overhead charges, \$550,352, development cost, bond discount and cost of financing, and in addition allowed for materials and supplies and working capital \$26,000, reaching a total of \$2,411,000. Mr. Megargee testified that his appraisal of \$1,834,648 excluded property of a value of \$707,000, which was being transferred to the Monmouth Lighting Company so that his estimate of the aggregate value of the electric lighting and traction properties was given as \$3,118,000. He testified, however, in such way that we conclude that the prices used in making the appraisal were practically present day prices. For the purposes before it the Board cannot approve the use of the excessive prices now being paid for various materials and supplies. In a reorganization of the entire finances of this company we are not dealing entirely with the present. Normal prices must be used in such appraisals and we, therefore, cannot accept the basis used by Mr. Megargee in his appraisal.

It is interesting to compare his total of \$3,118,000 with the appraisals made by Messrs. Humphreys and Heindel in 1913, the average of which appraisals was approximately \$2,400,000. The difference between Mr. Megargee's appraisal and those of

Jersey Central Traction Co.—Approval of Mortgage and Issuance of Bonds.

Messrs. Humphreys and Heindel represents the general increase in cost of materials and supplies during the past two years.

For the purpose of this reorganization we will accept the appraisal figures made by Messrs. Humphreys and Heindel which we have averaged at \$2,398,289, and to which we have added the extensions to the various properties up to December, 1915, amounting to \$160,789, giving us a total of \$2,559,078. From this we deduct the amount of \$707,656, which is the value of the property disposed of by the traction company. This leaves as the value of the property remaining in the traction company, after the reorganization, which we accept as the basis for capitalization of the Jersey Central Traction Company, \$1,851,422.

The petition of the company asks approval for the creation of a mortgage in the amount of \$5,000,000. This has been examined by the Board's counsel and meets with the approval of the Board, and a certificate of approval will be issued. Under this mortgage the company asks approval for an issue of bonds in the amount of \$800,000. These bonds, issued at 90, would net the company \$720,000. Deducting this amount from the accepted value of \$1,851,422, we have a balance of \$1,131,422.

The application of the company also asks approval for an issue of preferred stock in the amount of \$600,000. Deducting the preferred stock from the balance, we have an amount of \$531,422, which may fairly be represented by the issuance of common stock.

Analysis of the company's history shows that the cost of developing this property has been considerably in excess of the figures which we have allowed above as value. There has been considerable accrued depreciation in the life of this property but inspection shows that the property is now in excellent condition, power houses, sub-stations, overhead lines and way and structures having been extensively rebuilt during the past six years.

In arriving at the basis of value above, we have not made deductions for accrued depreciation. The company should, however, make suitable allowance for this purpose. We have accepted the figures given above as the best basis possible under all the circumstances for the financial reorganization of this company and its associated properties.

Proprietors of Morris Aqueduct—Increase of Rates.

Certificates will therefore issue, approving:

- (1) The creation of a mortgage in the amount of \$5,000,000.
 - (2) The issuance of bonds thereunder in the amount of \$800,000.
 - (3) The issuance of preferred stock in the amount of \$600,000.
 - (4) The issuance of common stock in the amount of \$531,400.
- Dated May 21st, 1917.

No. 439.

**IN THE MATTER OF PROPOSED INCREASE IN RATES BY THE
PROPRIETORS OF THE MORRIS AQUEDUCT.**

1. To meet abnormal conditions a water company is allowed to increase temporarily its minimum charge and to discontinue giving a 10% prompt payment discount.

2. A proposal to make an annual charge to customers for whom the company installs street service connections of 10% per annum is disapproved.

John O. H. Pitney, for petitioner.

The "Proprietors of the Morris Aqueduct" is a company furnishing water service in Morristown and vicinity. Under date of April 23d the company filed proposed increases in the rates charged for water service which were to become effective for the quarter commencing April 1st, 1917. Under date of April 24th the Board suspended the proposed increases until July 1st, 1917, and fixed May 23d as the date upon which to take up for consideration the proposed increases.

The rates charged by the Water Company have been as follows:

- 25c. per 100 cu. ft. up to and including 1,000 cu. ft. per month.
- 20c. per 100 cu. ft. for the excess over 1,000 cu. ft. per month.

The above charges, however, are subject to a minimum charge, as follows:

 Proprietors of Morris Aqueduct—Increase of Rates.

For premises supplied through a $\frac{5}{8}$ " meter, \$8.00 per year.

$\frac{3}{4}$ " meter	\$1.00 per month.
1 " meter	\$2.00 per month.
$1\frac{1}{2}$ " meter	\$3.00 per month.
2 " meter	\$5.00 per month.

The gross charge as above computed has been subject to a discount for prompt payment of 10%.

Until about three years ago the company had in effect a meter rental which was charged in addition to the charge for water. This resulted in an actual minimum for the users of moderate quantities of water of \$9.50 per annum. This meter rental was abolished, as stated above, three years ago.

The company now proposes to increase the minimum charge

for the $\frac{5}{8}$ " meter to \$0.83 $\frac{1}{2}$	per month, or \$10 per annum.
for the $\frac{3}{4}$ " meter to \$1.00	per month.
for the 1 " meter to \$2.00	per month.
for the $1\frac{1}{2}$ " meter to \$3.00	per month.
for the 2 " meter to \$5.00	per month.

In addition, the company proposes to discontinue giving the 10% prompt payment discount.

The company also proposes to charge in connection with service rendered to customers for whom the company will hereafter install street service connections to the curb at the company's expense, a charge equivalent to 10% per annum on the cost of that portion of the street service connection.

Testimony was submitted by the company showing that the costs of operation, taxes, police protection, and other charges had increased to such an extent as to make it imperative that the company should obtain a somewhat increased revenue. The company estimated that the increased costs in 1918 over the costs in 1916 would amount to at least the sum of \$4,950. It was estimated also that the increased revenue due to the change in the schedule would not exceed \$4.612 per annum.

The company has stipulated that if the increases are allowed to go into effect temporarily, that upon the return to operating conditions corresponding to those under which the company oper-

Jersey Central Traction Co. and Monmouth Lighting Co.—Transfer of Stocks.

ated in 1916, the rates would then be restored to the same basis as was effective in 1916.

After full consideration of all the testimony in this matter, and in consideration of the stipulation referred to above, the Board will allow the filing of the proposed changes with regard to the minimum charge and the discontinuance of the prompt payment discount.

The proposal to assess the cost of installing so much of the service as the company is required to pay, by the rules and regulations governing water utilities adopted by this Board cannot be approved. These rules and regulations establish a general policy. Amongst other requirements, the company installs a part of the service at its expense, the cost of which is then distributed to the proper capital accounts. The return thereon is received as upon other capital outlay and is reflected in the rates charged for service. It follows that it should not be assessed upon individual customers.

The order of suspension heretofore issued is hereby vacated.

Dated May 29th, 1917.

No. 440.

IN THE MATTER OF THE APPLICATION OF THE JERSEY CENTRAL TRACTION COMPANY AND OF MONMOUTH LIGHTING COMPANY FOR A TRANSFER ON THE BOOKS OF THOSE COMPANIES OF CAPITAL STOCKS TO THE AMERICAN RAILWAYS COMPANY.

The Public Utilities Act provides that no transfer of stock shall be made upon the books of any public utility company which either by itself or in connection with other transfers, would vest the control of the public utility in another corporation. In the petition before us it is proposed to vest the control of the Jersey Central Traction Company and of the Monmouth Lighting Com-

N. Y., S. & W. R. R.—Withdrawal of Trains.

pany in the American Railways Company and the transfers providing for the vesting of this control may not be made without the approval of the Commission.

The American Railways Company is an investment company, owning a large number of electric railway and electric lighting properties, some of which are located in the State of New Jersey.

The American Railways Company is a company authorized under the laws of the State of New Jersey.

The Jersey Central Traction Company has outstanding as a result of financial reorganization, capital stock in the amount of \$531,400. It is proposed to transfer this stock to the ownership of the American Railways Company. The Monmouth Lighting Company as a result of consolidation and purchase of certain properties now has outstanding capital stock in the amount of \$305,000. It is proposed to transfer this stock to the American Railways Company.

After full consideration of all the testimony submitted in this matter, the Board will give its approval to the transfers of stock on the books of the respective companies in accordance with the petition asking for approval.

Dated May 29th, 1917.

No. 441.

IN THE MATTER OF PROPOSED WITHDRAWAL OF PASSENGER
TRAINS BY THE NEW YORK, SUSQUEHANNA AND WESTERN
RAILROAD COMPANY.

ORDER.

The Board of Public Utility Commissioners, having been advised by the New York, Susquehanna and Western Railroad Company of its intention to put into effect, June 10th, 1917, a new schedule for the operation of passenger trains within the

D., L. & W. R. R. Co.—Grade Crossings—East Orange, Orange and Newark.

State of New Jersey, which would result in the withdrawal from operation of certain trains now in operation :

The Board of Public Utility Commissioners, after hearing, upon notice, finds and determines that adequate and proper service would not be afforded with the passenger train schedule proposed to be effective June 10th, and that to afford adequate and proper service the New York, Susquehanna and Western Railroad Company should continue to operate, and the Board **HEREBY ORDERS** the New York, Susquehanna and Western Railroad Company to continue the operation of trains Nos. 902, 904, 905, 907, 915, and 923 (unless train No. 943, on schedule to be effective June 10th, is operated between North Paterson and Butler, making stops as shown on table of May 6th for train No. 923), as shown on the schedule effective under date of May 6th, 1917, between stations in the State of New Jersey.

This order shall be immediately operative.

Dated June 8th, 1917.

No. 442.

IN THE MATTER OF PROCEEDINGS UNDER CHAPTER 57, PAMPHLET LAWS OF 1913, RELATING TO CERTAIN PUBLIC HIGHWAYS IN THE CITIES OF EAST ORANGE, ORANGE AND NEWARK, WHICH CROSS AND ARE CROSSED BY THE RAILROAD OPERATED BY THE DELAWARE, LACKAWANNA AND WESTERN RAILROAD COMPANY, AT THE SAME LEVEL.

ORDER.

It appears to the Board of Public Utility Commissioners that the following named streets, avenues and roads in the cities of East Orange, Orange and Newark, are, or may be, claimed to be public highways, to wit :

Crossing Main Line of Railroad Operated by Delaware, Lackawanna and Western Railroad Company.—Harrison Street, Bur-

D., L. & W. R. R. Co.—Grade Crossings—East Orange, Orange and Newark.

nett Street, S. Arlington Avenue, East Orange Parkway, Greenwood Avenue, Halsted Street, S. Walnut Street, Main Street, N. Maple Avenue, N. Fifteenth Street, S. Clinton Street, Winans Street, N. Munn Avenue, Grove Street, all in the said City of East Orange; N. Fourteenth Street and N. Fifteenth Street, in the City of Newark; Oakwood Avenue and Prince Street, in the City of Orange.

And Crossing Montclair Branch of Railroad Operated by Delaware, Lackawanna and Western Railroad Company.—Arlington Avenue, Grove Street, Springdale Avenue, N. Eighteenth Street and Fourth Avenue, in the City of East Orange.

And it further appears that said before named streets, avenues and roads, and the said railroad operated by the Delaware, Lackawanna and Western Railroad Company cross or may be claimed to cross each other at the same level.

Therefore the Board of Public Utility Commissioners, by virtue of the powers conferred upon it by statute, hereby initiates a proceeding and calls a hearing to determine whether said streets and avenues or any of them are public highways, and whether such of them as are public highways, and the said railroad cross each other at the same level, and whether the said crossings or any of them are dangerous to public safety, or whether the public travel on such highways or any of them is impeded by such crossings, and to determine what, if any, order shall be issued by said Board for the alteration of said crossings, or any of them, by substituting therefor a crossing or crossings not at the grade of such public highways, or any of them, under or over such railroad, or by reconstructing such railroad under or over such public highways, or any of them, or by vacating, relocating, or changing the lines, width, direction or location of such highways or any of them, and the opening of a new highway or highways in the place of the ones or one so ordered vacated; and to determine any and all other matters, the determination of which may be within the power of said Board, and which may be involved in and incidental to the separation of the grades of said highways, or any of them, and of said railroad.

And it further appears to the said Board of Public Utility Commissioners that the following named streets and avenues in

D., L. & W. R. R. Co.—Grade Crossings—East Orange, Orange and Newark.

said cities of East Orange, Orange and Newark are, or may be claimed to be, public highways, which may be affected by a plan for separating the grades of certain highways and the said railroad operated by the said Delaware, Lackawanna and Western Railroad Company, to wit:

In the Vicinity of the Main Line of Railroad Operated by the Delaware, Lackawanna and Western Railroad.—Evergreen Place, Washington Place, Prospect Place, Amherst Street, McKinley Avenue, Railroad Place, Arlington Place, road through property now or formerly of F. M. Shepard, north of railroad between N. Munn Avenue and Parkway; N. Munn Avenue, unnamed street or road on property now or formerly of F. M. Shepard, back of Post-Office, between Main Street and N. Munn Avenue; Jones Street, Railroad Avenue, Willow Street, Academy Street, Davis Avenue, Davis Place, North Street, New Street, Church Place, unnamed road north of and parallel to the railroad from N. Maple Avenue to Davis Avenue, Division Place, Eaton Place, Hollywood Plaza, N. Hollywood Avenue, Driftway opposite east side of E. Seventeenth Street, N. Sterling Street, Hadden Place, N. Nineteenth Street, N. Eighteenth Street, Centerway, N. Seventeenth Street, N. Sixteenth Street, all in the said City of East Orange; N. Eleventh Street, Gray Street, Bathgate Place and Seventh Avenue, in the City of Newark; Commerce Street, Hickory Street and Kenilworth Place, in the City of Orange.

And in the Vicinity of and Crossing Montclair Branch of Railroad Operated by Delaware, Lackawanna and Western Railroad Company.—Hoffman Boulevard, Bellegrade Avenue, Crescent Place, Centerway, Second Avenue, Rowe Street, Division Street, N. Eighteenth Street, N. Sixteenth Street, Gray Place, Chauncey Avenue, Abington Avenue, Sawyer Avenue, Roosevelt Avenue, Renshaw Avenue, Madison Avenue, Whitman Avenue, N. Maple Avenue, Lafayette Avenue, First Avenue, Newfield Street, Warwick Street, Leslie Street, footpath or road at Crocker-Wheeler plant, east end of station, N. Fifteenth Street, N. Nineteenth Street, Waldo Avenue, N. Seventeenth Street, in the City of East Orange.

And the said Board of Public Utility Commissioners hereby fixes Wednesday, the 20th day of June, 1917, at the hour of

D., L. & W. R. R. Co.—Grade Crossings—East Orange, Orange and Newark.

10:30 in the forenoon, as the time, and its rooms at No. 790 Broad Street, Newark, New Jersey, as the place of hearing hereby called.

And the said Board hereby directs its secretary within ten days from the date of the entry hereof, to give notice to the City of East Orange, the City of Orange and the Mayor and Common Council of the City of Newark, the Board of Water Commissioners of the City of East Orange, the Board of Recreation Commissioners of the City of East Orange, the Board of Shade Tree Commissioners of the City of East Orange, the Essex County Park Commission and the corporations, co-partnerships and individuals interested in the hearing hereby called by sending to the said City of East Orange and the Mayor and Common Council of the City of Newark, the Board of Water Commissioners of the City of East Orange, the Board of Recreation Commissioners, the City of Orange, the Board of Shade Tree Commissioners of the City of East Orange, the Essex County Park Commission and the corporations, co-partnerships and individuals interested in the hearing hereby called, the Delaware, Lackawanna and Western Railroad Company, the Morris and Essex Railroad Company, the Newark and Bloomfield Railroad, Public Service Gas Company, Public Service Electric Company, Public Service Railway Company, New York Telephone Company, Western Union Telegraph Company, Postal Telegraph Company, American Telegraph and Telephone Company, certified copies of this order and publishing in the Newark Evening News, a newspaper circulated in the cities of East Orange, Orange and Newark, for two consecutive issues at least one week prior to the date of the hearing hereby called, the notice provided for by Chapter 238, Pamphlet Laws of 1914.

And the said Board hereby determines that such mailing and publication shall constitute reasonable notice of the proceeding hereby initiated and the hearing hereby called.

Dated June 8th, 1917.

E. F. Price Co. vs. American Express Co.

No. 443.

IN THE MATTER OF THE COMPLAINT OF E. F. PRICE vs. AMERICAN EXPRESS COMPANY, IN RE EXCESSIVE RATES ON MILK IN CANS BETWEEN SOUTH JERSEY POINTS AND ATLANTIC CITY.

E. F. Price and Charles J. Fithian, for petitioner.

E. E. Bush, for respondent.

This case was initiated by E. F. Price, a dealer in milk in Atlantic City. The complainant alleges that the rates charged by the American Express Company for milk between points south of Bridgeton on the Southern Division of the Central Railroad and Atlantic City are exorbitant and unreasonable, in view of the rates charged by the United States Express Company prior to July 1st, 1914. On said date express operations on the Central Railroad were taken over by the American Express Company. The United States Express Company's rate was 25 cents per 40-quart can; the American Express Company rate is 35 cents per 40-quart can, an increase of one-fourth of a cent per quart.

The rates of the American Express Company on milk are based on a mileage scale. Points south of Bridgeton and Atlantic City come within the scale of "over 50 and not over 75 miles, 35 cents per can of 40 quarts." This rate includes return of empty cans, but does not include pick-up or delivery service. From points of consignment milk is transported over the Central Railroad to Winslow Junction, and from the Junction to Atlantic City on the Philadelphia and Reading Railroad. Since the hearing in connection with milk rates it developed in the investigation of the situation that the Central Railroad Company could handle the transportation of milk between points on its line and Atlantic City in conjunction with the Philadelphia & Reading Railroad; and at a conference with the representatives of railroad companies

Hillcrest Water Co.—Approval of Mortgage and Issue of Bonds.

a scale of rates was considered representing a reduction in the rates charged by the express company, viz.:

46 quart can.....	32c. per can.
40 " "	30c. " "
30 " "	22c. " "
20 " "	17c. " "

As this scale appeared to be a reasonable rate basis for the service, and it being satisfactory to the complainant, the companies agreed to put into effect said rate scale, and tariff was issued accordingly. It does not appear necessary to take any further action and the proceeding will be discontinued.

Dated June 12th, 1917.

No. 444.

**IN THE MATTER OF THE APPLICATION OF THE HILLCREST
WATER COMPANY FOR APPROVAL OF A MORTGAGE FOR
\$150,000 AND ISSUE OF BONDS THEREUNDER.**

If approval is given to the issue of bonds as prayed for there would be outstanding capital stock in the amount of \$50,000 and bonds in the amount of \$112,000. In view of the fact that the company is not yet able to fully meet its interest charges, the Board is unwilling to approve an issue of bonds which would bring about such a great disparity between the amount of bonds and the amount of stock outstanding.

Approval is given to the issuance of bonds in the total amount of \$93,000.

H. J. Hapgood, for the company.

The Hillcrest Water Company was organized May 19th, 1911, for the purpose of taking over the water system installed by the Development Company in the tract known as Mountain Lakes, just west of Boonton, Morris County.

Under date of June 4th, the company submitted applications for approval of an issue of stock and approval of a mortgage and the issuance of 6% bonds thereunder; and under date of August

Hillcrest Water Co.—Approval of Mortgage and Issue of Bonds.

29th, 1911, the Board approved the issue of \$50,000 in stock, a mortgage in the amount of \$50,000 and an issue of bonds thereunder in the amount of \$10,000.

Under date of June 4th, 1912, the company submitted an application for approval of the issue of bonds in the amount of \$20,000 to pay for further construction work in Mountain Lakes; and under date of June 17th, 1912, certificate was issued, approving the issue of \$20,000 in bonds.

Under date of March 6th, 1913, the company submitted an application for approval of the issue of additional \$20,000 in bonds to pay for additions to plant and system and this was approved in a memorandum dated April 29th, 1913. These bonds bore interest at 6% and were issued at par.

Under date of May 27th, 1914, the company applied for the approval of an issue of capital stock in the amount of \$50,000 to provide for additional construction. Prior to this application there was outstanding capital stock in the amount of \$50,000 and bonds in the amount of \$50,000. As a result of this application the expenditures of the company were carefully analyzed by the engineers of the Board and some criticisms were made of the prices paid to the general contractors for the work. A certificate was issued, however, under date of February 16th, 1915, approving the issue of capital stock in the amount of \$15,000, it having been determined by the Board that expenditures to that amount had been completed prior to that date.

Under date of April 21st, 1917, the company has submitted a new application providing for the placing of a new mortgage upon its property for the purpose of refunding and retiring bonds now outstanding under the original mortgage and in order to pay for certain additional items of construction work. The authorized capital stock at present is \$150,000. Of this there has been issued and is outstanding \$50,000. In addition, a certificate was issued, approving the further issue of capital stock in the amount of \$15,000, but up to the present time this has not been issued and the company now asks that this certificate be cancelled. There is issued and outstanding bonds in the amount of \$50,000 under the old mortgage.

The application now before the Board asks the approval (1)

Hillcrest Water Co.—Approval of Mortgage and Issue of Bonds.

of a new mortgage in the amount of \$150,000; (2) an issue of bonds in the amount of \$112,000, the proceeds of which are to be used as follows: (a) bonds in the amount of \$52,500 to provide for the retirement at 105 of the bonds now outstanding, amounting to \$50,000, and (b) \$50,500 to be issued at about 80 so as to obtain the sum of \$47,375. This latter figure is based upon a statement of the company that the total bond discount would amount to \$14,625.

The holder of these bonds stipulated that if exchange of these bonds was permitted at 105 he would waive interest on outstanding bonds from April, 1916.

Expenditures by the company up to May 1st, 1917, not so far capitalized, amount to \$34,068.22, and the balance of \$10,806.78 is the amount available for new construction which the company estimates will cost approximately \$10,700. The proposed construction work will consist of small extensions, service connections, and additional meters to serve approximately one hundred additional houses. It is expected that approximately one hundred hydrants will also be installed, the expenditures for which are included in the estimate of \$10,700.

In the report issued by the Board April 29th, 1913, attention is called to the fact that the company was not then able to pay its full interest charges, but that, as the company was in the developmental stage, having been organized less than two years before, it was not to be expected that interest could be earned at that time, but that it was reasonably expected that money for the payment of interest would be available in later years. In the testimony submitted May 8th, 1917, in connection with the present application, it was also shown that the company is not fully able to pay all of its interest but expected to be fully able to do this as soon as hydrants are installed for fire protection purposes. This may be entirely true, but in order that the Hillcrest Water Company may furnish adequate fire protection, it will undoubtedly be necessary to replace some of the present mains by mains of larger sizes and this will involve a still larger investment and a cost for replacement which cannot be entirely capitalized.

If approval is given to the issue of bonds as prayed for in the present petition, there would then be outstanding capital stock in

Electric Light and Power Co. of Hightstown—Approval of Mortgage, etc.

the amount of \$50,000 and bonds in the amount of \$112,000. In view of the fact that the company is not yet fully able to meet its interest charges, the Board is unwilling to approve an issue of bonds which would bring about such a great disparity between the amount of bonds and the amount of stock outstanding.

CONCLUSIONS.

The Board will not cancel the present outstanding certificate by which the company now has the right to issue stock in the amount of \$15,000, but will give its approval to the creation of a mortgage of \$150,000 and the approval thereunder of bonds in the amount of \$93,000 to be issued as follows: \$52,500 in bonds to be issued to take up the present bonds amounting to \$50,000 and the balance of \$40,500 to be issued at not less than 80, which will yield the amount of \$32,400. This, with the proceeds of the stock, will yield the amount of \$47,400, which is practically the same as would have been obtained from the bond issue.

Dated June 19th, 1917.

No. 445.

IN THE MATTER OF THE APPLICATION OF ELECTRIC LIGHT AND
POWER COMPANY OF HIGHTSTOWN FOR APPROVAL OF MORT-
GAGE AND ISSUE OF BONDS.

Application is made for approval of a mortgage in the amount of \$75,000 and the issuance of bonds thereunder in the amount of \$41,000.

The present value of the plant is found to be \$41,936.00. Approval is given to the mortgage and to the issuance of bonds in the amount of \$36,000.00 of which \$10,000.00 are to be issued par for par for outstanding bonds and the balance to be issued and sold on such basis as will pay all the outstanding debts of the company.

Andrew P. Maloney and F. J. Thron, for the petitioner.

Electric Light and Power Co. of Hightstown—Approval of Mortgage, etc.

This company was incorporated in 1898 and constructed a small steam generating plant, together with a distribution system, located entirely within the limits of Hightstown.

In connection with the construction of this plant, the company issued capital stock to the amount of \$16,250, and \$10,000 first mortgage five per cent. bonds. Since the plant was first constructed, additions have been made to the distribution system partly from earnings and partly from proceeds of loans, so that at the present time the property of the company has a value considerably in excess of the outstanding capitalization. The company has, however, a large number of debts which were purchased by Mr. Maloney and are held by him.

The purpose of the present application is to provide the funds for the liquidation of the outstanding indebtedness and the refunding of the present bonds.

The company's application asks for the approval of a mortgage in the amount of \$75,000, and the issuance of bonds thereunder in the amount of \$41,000. Of these bonds, \$10,000 are to be used for an even exchange of the bonds now outstanding. The balance of the bonds are to be issued at 80 or a trifle better, to realize an amount of money which would be used, as follows:

\$4,000 for working capital, \$1,000 for additions made between January 1st and March 20th, 1917, and the balance to pay off all outstanding obligations which were stated to be for the amount realized, \$20,800.

In support of the application, the company submitted an inventory and appraisal from which they claimed a total fixed capital value as of March 20th, 1917, of \$53,207.82. This inventory had been checked in the field and the prices were revised by the Commission's appraisal engineers, who found the total fixed capital to be \$52,072, with additions of \$1,000 for property constructed in the early part of 1917.

The accrued depreciation to December 1st, 1916, is estimated at \$10,136. Deducting this from the cost, new, gives a present value of \$41,936, for the fixed capital, December 31st, 1916. Deducting from this amount the par value of stock and bonds already outstanding, \$26,250, leaves \$15,786, not now represented by outstanding securities. To this amount should be added \$4,000

New York Telephone Co. and Atlantic Coast Telephone Co.—Merger.

for working capital and \$1,000 for work done in 1917, which gives a total of \$20,786 cash to be realized from the bonds in addition to those required for refunding purposes.

If the bonds are sold at 80 this would require approximately \$26,000 in bonds. Adding to this the \$10,000 of bonds for refunding, makes a total of \$36,000 in bonds, which is all that in the opinion of the Board should be issued in connection with the presently existing property.

CONCLUSIONS.

Board will, therefore, give its approval to the mortgage in the amount of \$75,000, and will approve the issuance of bonds in the amount of \$36,000. \$10,000 of the bonds are to be issued par for par, for the outstanding bonds, and the balance of \$26,000 in bonds are to be issued and sold on such basis as will pay all of the outstanding debts of the company. The difference between the first value of bonds and the net proceeds is to be amortized within the life of the bonds.

Dated June 26th, 1917.

No. 446.

IN THE MATTER OF THE APPLICATION OF THE NEW YORK TELEPHONE COMPANY AND ATLANTIC COAST TELEPHONE COMPANY FOR APPROVAL OF A MERGER AND CONSOLIDATION OF THE TWO COMPANIES.

The merger and consolidation proposed not appearing to be in any way opposed to the public interest, but appearing on the contrary to be to the public advantage, as well as in the legitimate interest of the petitioners, the same is approved.

R. V. Marye, for the petitioner.

The petition in this matter recites that the New York Tele-

New York Telephone Co. and Atlantic Coast Telephone Co.—Merger.

phone Company is a member of a group of associated telephone companies rendering service throughout the United States and commonly referred to as the "Bell System"; that the Atlantic Coast Telephone Company is a corporation owning and operating a telephone system in the City of Atlantic City and vicinity, and that all the capital stock of the Atlantic Coast Telephone Company except qualifying shares held by directors, is owned by the New York Telephone Company. It is further recited that the necessary connections between the systems of the two companies have been made to provide complete interchange of telephonic communication between the subscribers and patrons of both, and that to secure greater economy and efficiency in the management and operation of the service it is desired to consolidate the Atlantic Coast Telephone Company with the New York Telephone Company giving to the latter company "full ownership and control of all the property, franchises, powers and privileges owned and belonging to or exercised by the two corporations separately, and thus unifying the service as rendered by the so-called 'Bell System' throughout the said State."

It appears that an agreement of consolidation, duly authorized, has been entered into between the two companies and that the same has been approved by the unanimous votes of the stockholders of the two companies. A copy of the agreement is attached to the petition.

It appears further that the City Commission of Atlantic City, by the unanimous vote of the members thereof, has, by ordinance, given the consent of the city to the consolidation. Hearing on the application has been held by this Board at which testimony was submitted on behalf of the petitioner. No objection to approval of the merger and consolidation has been made.

The Atlantic Coast Telephone Company was formerly controlled through stock ownership by the Inter-State Telephone Company. The latter company was sold at receiver's sale to the New York Telephone Company. The outstanding capital stock of the Atlantic Coast Company passed, by this sale, which was approved by the Board October 19th, 1915, to the New York Telephone Company. At the hearing on the application under consideration, counsel for the New York Telephone Company, referring to this

Easton Gas Works—Approval of Mortgage and Issue of Bonds.

sale, stated: "The arrangement between the Bell and the Inter-State was, if the Board granted approval of the acquisition by the New York Company of the assets of the Inter-State, the Bell Company would preserve all the connections that the Inter-State customers had previously had." Mr. Marye stated further that "under this consolidation the Atlantic Coast Company will now have access to the entire Bell system, not only in this State but the United States. They can retain all the connections of the Inter-State, the Keystone Company of Philadelphia, and will acquire access to all the Bell system through the entire United States, and at a rate that is approximately the same as they have always been paying for local service."

The Board having approved the sale of the Inter-State Company as an incident of which the control of the Atlantic Coast Telephone Company passed to the petitioner, the merger and consolidation proposed not appearing to be in any way opposed to the public interest, but appearing, on the contrary, to be to the public advantage, as well as in the legitimate interest of the utilities, petitioners, the merger and consolidation will be approved and a certificate of approval will issue.

Dated June 26th, 1917.

No. 447.

IN THE MATTER OF THE APPLICATION OF THE EASTON GAS
WORKS FOR APPROVAL OF MORTGAGE AND ISSUE OF BONDS
AND STOCK.

Approval is given to issues of stock since July 4th, 1910, in the amounts of \$200,000 preferred and \$269,400 common, of a mortgage, as amended in 1912, and of the issuance of bonds thereunder in the amount of \$149,000. Approval is also given to the issuance of \$385,000 of bonds under a new mortgage for refunding a like amount of bonds of subsidiary companies, the bond discount to be amortized during the life of the bonds.

William Buchsbaum and E. G. Holzer, for the petitioner.

Easton Gas Works—Approval of Mortgage and Issue of Bonds.

The Easton Gas Company was incorporated under a special act of the Legislature of Pennsylvania, March 14th, 1850, for the purpose of supplying gas light to the Borough of Easton, Pennsylvania. By a special act of the Legislature of New Jersey on March 16th, 1854, the Easton Gas Company was authorized to supply gas light to the Village of Phillipsburg, New Jersey, and the New Jersey Legislature further provided that the Easton Gas Company should in all courts of law in the State of New Jersey be deemed and taken to be an existing corporation in the State of New Jersey. The Legislature of Pennsylvania, April 20th, 1854, assented to the arrangement by which the Easton Gas Company became a joint New Jersey-Pennsylvania corporation.

September 29th, 1903, the Easton Gas Light Company was consolidated with the Delaware Gas Light Company, a Pennsylvania corporation, the West Easton Gas Light Company, a Pennsylvania corporation, the Palmer Gas Light Company, a Pennsylvania corporation, the Williams Gas Light Company, a Pennsylvania corporation, and the Forks Gas Light Company, a Pennsylvania corporation, forming the Easton Gas Light Company.

June 24th, 1910, the Easton Gas Light Company consolidated with the Easton Fuel Gas Company, a Pennsylvania corporation, and the Easton Power Company, a Pennsylvania corporation, forming the Easton Gas and Electric Company.

The Warren County Gas Light Company was organized under a special act of the New Jersey Legislature March 25th, 1875, for the purpose of selling gas in the County of Warren, New Jersey. The Peoples Light, Heat and Power Company of Phillipsburg, a New Jersey corporation, was incorporated December 19th, 1899, for the purpose of manufacturing and selling both gas and electricity for light, heat and power purposes in the County of Warren, State of New Jersey. The Warren County Gas Light Company was consolidated with the Peoples Light, Heat and Power Company, December 26th, 1899. September 15th, 1903, the Peoples Light, Heat and Power Company of Phillipsburg, a New Jersey corporation, the Phillipsburg Electric Lighting, Heating and Power Company, a New Jersey corporation, and the Easton Power Company, a New Jersey corporation, were consolidated, forming the Easton Gas and Electric Company, a New Jersey corporation.

Easton Gas Works—Approval of Mortgage and Issue of Bonds.

July 1st, 1910, the Easton Gas and Electric Company, a Pennsylvania corporation, holding a controlling stock interest in the Easton Gas and Electric Company, the New Jersey corporation, caused the New Jersey corporation to transfer all of its gas and electric properties to the Pennsylvania corporation.

The Easton Gas and Electric Company of Pennsylvania, on January 16th, 1912, sold all of its electrical properties then owned by it in New Jersey and Pennsylvania to the Eastern Pennsylvania Power Company, a Pennsylvania corporation, and by a decree of the Court of Common Pleas of Northampton County, Pennsylvania, dated January 18th, 1912, surrendered all of the said company's electrical franchise rights in the State of Pennsylvania and by a certificate issued by the Secretary of the Commonwealth of Pennsylvania, dated January 22d, 1912, changed its name from Easton Gas and Electric Company to Easton Gas Works.

The Easton Gas Works has an authorized capital stock of \$1,000,000, \$500,000 thereof being 7% cumulative preferred stock and \$500,000 being common capital stock. There is now issued and outstanding \$200,000 of the said 7% cumulative preferred stock and \$269,400 of the common capital stock.

On July 1st, 1910, the Easton Gas and Electric Company, the Pennsylvania corporation, executed a first mortgage to the Fidelity Trust Company of Newark, New Jersey, as trustee, covering all of its property and franchises in the City of Easton, Pennsylvania, and Town of Phillipsburg, New Jersey, in the amount of \$7,500,000. The term of the mortgage was forty years and the rate of interest 5%.

After the Easton Gas and Electric Company of Pennsylvania changed its name to Easton Gas Works on January 22d, 1912, the said Easton Gas Works revised the mortgage referred to above, making the Girard Trust Company the trustee of said revised mortgage, but reducing the authorized issue of bonds to \$1,000,000, the said new issue of bonds being likewise known as first consolidated mortgage 40-year 5% gold bonds. The said revised mortgage covered all the gas plant property and franchises of the said Easton Gas Works in the City of Easton, Pennsylvania, and in the Town of Phillipsburg, New Jersey. Said mortgage is

Easton Gas Works—Approval of Mortgage and Issue of Bonds.

recorded in both Pennsylvania and New Jersey. There are now issued and outstanding bonds in the amount of \$366,000, \$223,000 thereof having been issued pursuant to Paragraph A, Article 2 of said mortgage; \$142,000 thereof having been issued pursuant to Paragraph B of Article 2 of said mortgage; and \$1,000 having been issued October 30th, 1916, pursuant to Paragraph C, of Article 2 of said mortgage, in exchange for two of the said \$500 bonds of Peoples Light, Heat and Power Company, above referred to. In addition to the above there have been cancelled, pursuant to the sinking fund provisions of said mortgage, \$7,000 of said bonds, \$3,000 thereof having been cancelled August 1st, 1915, and \$4,000 thereof August 1st, 1916.

The total securities now outstanding amount to \$1,219,400. Of these securities it appears that the transactions which have taken place requiring the approval of the Board, but which have not been approved by the Board, are as follows:

- (1) The execution of the revised mortgage.
- (2) The issuance of bonds thereunder to the extent of \$385,000 for the purpose of refunding Delaware Gas Light Company bonds in the amount of \$305,000 and Peoples Light, Heat and Power Company bonds in the amount of \$80,000. With reference to the latter item it should be noted that one thousand dollar bond has been retired since its issue so that the actual amount outstanding is \$79,000.
- (3) The issue of preferred stock in the amount of \$200,000, issued on March 18th, 1912.
- (4) The issue of common stock in the amount of \$200,000 which was issued March 18th, 1912.
- (5) An issue of common stock in the amount of \$53,200, which was issued December 17th, 1913, to the Pennsylvania Utilities Company.
- (6) An issue of common stock in the amount of \$16,200, issued December 26th, 1913, to the Pennsylvania Utilities Company.
- (7) The issue of bonds under the new mortgage now outstanding, in addition to the \$385,000 held for refunding, amounts to a total of \$372,000. Of these \$223,000 were issued July 1st, 1910,

NOTE.—Items (3) and (4) were issued in exchange for stock of the older company, much greater in amount.

Easton Gas Works—Approval of Mortgage and Issue of Bonds.

prior to the time the Public Utility Commission came into existence. The following issues do require the Board's approval:

January 24th, 1912.....	\$92,000
January 22d, 1913.....	6,000
December 26th, 1913.....	5,000
December 10th, 1915.....	26,000
April 13th, 1916.....	20,000
Total	\$149,000

Of these bonds, \$6,000 have been retired by means of the Sinking Fund, leaving outstanding \$366,000. The total bonds now outstanding amount to \$750,000, including those held for redemption of older bonds.

The total stock outstanding at the present time is:

Preferred Stock	\$200,000
(Issued in exchange for much larger amount of stock of the Easton Gas and Electric Co.)	
Common stock, issued in exchange.....	200,000
Common stock	53,200
Common stock	16,200
Total common stock.....	\$269,400

The aggregate of stock and bonds outstanding against the property is as follows:

Preferred stock	\$200,000
Common stock	269,400
Bonds	750,000
Total	\$1,219,400

This property has been inventoried and appraised by the company. The inventory has been checked and prices revised by the appraisal engineers of the Commission. The engineers of the Commission have arrived at the conclusion that the cost to reproduce the property as of January 31st, 1916, is \$1,089,649. This is based upon general average normal prices for the previous ten-year period and does not take into account excessive costs prevalent at the present time. The book value corresponding to the fixed capital is \$1,212,774; this indicates a deficit in fixed capital of \$123,125.

 Easton Gas Works—Approval of Mortgage and Issue of Bonds.

Due to changes in the management and control of this property and to insufficient records, it is not known at what figure the bonds now outstanding were issued. If issued at 80, the lowest figure allowed by the law of New Jersey for the bond, discount would amount to \$150,000. The total deficit, as stated, is \$123,125, and if this deficit is treated in the same way that is required for bond discount and amortized within the term of the mortgage, the result contemplated by New Jersey law will be attained; that is, the bringing of the value of the property to a parity with the face value of outstanding securities.

The bulk of the property involved in this matter is located outside of the State of New Jersey, but the law under which the New Jersey Commission acts provides that all securities issued by a company operating within the State of New Jersey must meet with the Board's approval before they are issued. This requirement was disregarded by the predecessors in the management of the Easton Gas Works, and securities, as stated above, were issued without the Board's approval. The mortgage also, as amended in 1912, should have been submitted to the Board for its criticism and approval before being executed.

CONCLUSIONS.

Upon the facts now presented, the Board will approve the issues of stock made since July 4th, 1910, as follows:

Preferred stock	\$200,000
Common stock	269,400

The Board will also approve the mortgage as amended in 1912 and will approve also the issuance thereunder of bonds in the amount of \$149,000, which bonds have been issued at various times since the Public Utility Commission of New Jersey took jurisdiction in this matter.

The Board will also approve the issuance of \$385,000 in bonds under the new mortgage for the purpose of refunding a like amount of bonds of subsidiary companies, the bond discount to be amortized during the life of the bonds.

Dated June 26th, 1917.

Maple Shade Water Co.—Application for Approval of Rates.

No. 448.

IN THE MATTER OF THE APPLICATION OF THE MAPLE SHADE
WATER COMPANY FOR APPROVAL OF INCREASED RATES.

1. The development period of a public utility does not depend entirely on the period of time during which it is building up its business but depends also upon the total amount of business done. The first few customers cannot be called upon to pay the entire operating expenses of a water company.

2. The Board finds increase in rates proposed to be unreasonable and disapproves the same.

E. H. Hill, for the petitioner.

E. H. Cutler, for the objectors.

C. M. Taylor, Jr., for himself.

Under date of April 18th, the Maple Shade Water Company filed a statement with the Board that it proposed to increase its rates for service fifty per cent. above those then prevailing.

It appears from the statement of the company and from the testimony that the proposal to increase rates is based on an analysis of operating expenses and earnings and a further analysis of the relation of the net earnings to the value of the property involved in furnishing the service.

The Maple Shade Water Company operates a small system located in a part of Chester Township, Burlington County. It was originally installed to supply water to a real estate development and through the sale of property of an estate came into the ownership of a small number of persons, of whom Mr. Eugene H. Hill is the principal representative. The company is not incorporated, and originally operated by means of a windmill, but as this became insufficient and inadequate, an electric motor was installed to operate the pumps and later on a filter was installed. There is but one public road in the territory served. Upon the installation of a filter the rates were increased from those previously charged and at that time all of the then customers agreed to pay the increased

Maple Shade Water Co.—Application for Approval of Rates.

rates, on consideration that the water would be filtered. The water furnished appears to be satisfactory in quality and quantity, although there have been some controversies with regard to the failure of the company to extend its mains to serve new customers.

The number of customers supplied by the company is less than thirty-five and although it is clear that the net revenues are not sufficient to pay an interest rate on the value of the property in use, it does not seem reasonable to expect that such a limited number of customers could be depended upon to provide sufficient revenue to pay all of the operating expenses and a return on the investment. The development period of a company does not depend entirely on the period of time during which it is building up its business, but depends also upon the total amount of business done. Surely the first few customers cannot be called upon to pay the entire operating expenses of a water company. This is readily seen when it is stated that the total operating revenues for 1916 were \$990.54. The operating expenses were \$472.32, leaving a net revenue of \$518.22. From this must be taken an allowance for depreciation, taxes, extraordinary repairs, etc., leaving very little to apply as interest on the investment. The cost of operating labor for the entire year was only \$69.50; maintenance expenses for the year 1916 were \$53.46. The actual net income for the year 1916 was \$188.04, and this would represent net earnings of about 2½% on the value of the plant and equipment which is estimated at about \$7,200, and more than 6% upon \$3,000, the amount bid for the property at the sale. The principal items of expense are electric power and filtering material. Testimony shows that there have been no increased costs for these items other than might be expected due to the increase in the amount of water pumped.

The rates charged by the company at the present time involve a minimum charge of \$20.00 per annum, for which a consumption of 10,000 gallons is allowed. From this it will be seen that the rate for the first 10,000 gallons is \$2.00 per 1,000 gallons. This is by far the highest rate charged for water anywhere in the State. In excess of the amount allowed for the minimum charge the rates are as follows:

Maple Shade Water Co.—Application for Approval of Rates.

- 60c. per 1,000 gallons for from 10,000 to 100,000 gallons.
- 50c. per 1,000 gallons for from 100,000 to 500,000 gallons.
- 40c. per 1,000 gallons for from 500,000 to 1,000,000 gallons.
- 30c. per 1,000 gallons for 1,000,000 and over.

The change proposed by the company is a flat increase of 50% to all customers now supplied.

A number of customers, by letter, agreed to the increases, but certain other customers, who appeared at the hearing, represented by E. H. Cutler, opposed any change in the rates, insisting that they are high enough at the present time.

A rate of \$2.00 per 1,000 gallons is, as stated before, the highest rate charged in the State of New Jersey. It is true that in two or three isolated cases, where a fine quality of spring water is supplied to a limited number of customers, the rate is as high as 60 cents per 1,000 gallons, but the rates charged by many of the medium and large sized companies in the State do not exceed 35 cents per 1,000 gallons for service to the small consumers. Service to larger consumers is furnished at very much lower rates. With regard to the flat or fixture rates charged, comparison shows that the rates charged by the Maple Shade Company result in charges somewhat greater than those paid by customers in many other localities for similar service.

CONCLUSIONS.

As already stated, the application of the company is based upon a claim that the company is not earning a sufficient amount on the investment. The reason for this has been pointed out as due to the fact that this company has less than thirty-five customers and must still be considered as in the developmental stage. No changes have occurred in costs of operation and under all the circumstances the Board finds and determines that an increase in the rates at this time is not warranted and the proposed increase is therefore disapproved.

Dated July 3d, 1917.

Millville Gas Light Co. et al.—Approval of Merger, etc.

No. 449.

IN THE MATTER OF THE APPLICATION OF THE MILLVILLE GAS
LIGHT COMPANY ET AL. FOR APPROVAL OF MERGER AND
CONSOLIDATION, ETC.

1. Approval will be given to a proposed consolidation of public utilities upon filing of executed copies of agreement of merger and consolidation with proof of notice to stockholders and compliance with statutory requirements.

2. Approval is refused to securities which, if given, would result in refunding securities to which the Board would not have given its approval originally.

3. In giving its approval to other securities it is required that a suspense account be set up to cover debt discount and expense; same to be written off from earnings during the term of the bonds.

Joseph H. Gaskill, for petitioners.

Under date of April 10th, 1917, petition was submitted to the Board for its approval of the consolidation of the Millville Gas Light Company, Citizens Gas Company of Landis Township, Citizens Gas Company of Vineland, Commercial Gas Company, Maurice River Gas Company, Downe Township Gas Company, Lawrence Gas Company, Fairfield Gas Company, Deerfield Gas Company, Pittsgrove Gas Company, all of the County of Cumberland, State of New Jersey.

The newly formed company proposes to take the name of the Cumberland County Gas Company.

The Millville Gas Light Company owns and operates a gas manufacturing plant in the city of Millville, and sells and distributes gas in that city through its own mains. It sells and distributes gas through the mains of the other companies referred to in this report. All of the companies named above other than the Millville Company are leased to and operated by the Millville Gas Light Company.

The Millville Gas Light Company has outstanding stock in the amount of \$200,000 and bonds in the amount of \$500,000. The subsidiary companies have outstanding stock in the amounts according to the following table. All of the stock of these companies is owned by the Millville Gas Light Company:

 Millville Gas Light Co. et al.—Approval of Merger, etc.

Citizens Gas Company of Landis Township.....	\$30,000
Citizens Gas Company of Vineland.....	25,000
Commercial Gas Company.....	25,000
Maurice River Gas Company.....	25,000
Downe Township Gas Company.....	30,000
Lawrence Gas Company.....	30,000
Fairfield Gas Company.....	30,000
Deerfield Gas Company.....	30,000
Pittsgrove Gas Company.....	30,000
Total	\$255,000

The subsidiary properties referred to above have no mortgages and no debts outside of those owing to the Millville Gas Light Company for construction purposes.

The entire financing of this group of properties has been accomplished through the securities of the Millville Gas Light Company, which, as stated above, consist at the present time of capital stock in the par value of \$200,000 and bonds in the par value of \$500,000. In addition, however, the Millville Gas Light Company has outstanding certain construction debts, which are more than offset by current assets.

The application of the company asks the approval of a consolidation to be carried out in the following manner:

For the \$200,000 stock of the Millville Gas Light Company now outstanding, the Cumberland County Gas Company is to issue an equal amount of stock. For the stock of the subsidiary companies the Cumberland County Gas Company proposes to issue stock in the amount of \$100,000, but as the subsidiary stocks are owned by the Millville Gas Light Company, this would result in bringing into the treasury of the newly formed company capital stock in the amount of \$100,000. Such a transaction results in unnecessary complications with reference to the issue of stock without corresponding advantages. This stock could not be sold without the approval of the Board. No advantage can result from allowing it to be issued as proposed. The Board will, therefore, deny approval of the issue of the \$100,000 stock by the Cumberland County Gas Company for the exchange of the \$255,000 of stock of the subsidiary companies. All of the subsidiary companies' stocks are owned by the Millville Gas Light Company and upon consolidation must be cancelled.

 Millville Gas Light Co. et al.—Approval of Merger, etc.

All of the properties concerned in this proceeding have been constructed by a construction company under such conditions that nearly all of the overhead and carrying charges were met by this company and not directly charged to the operating company. The testimony shows that the actual net cost of the construction, including only such overhead or other carrying charges as were paid, was \$802,302.98. These properties were appraised by the company, and it was claimed that the cost to reproduce the property now is \$1,108,100. Examination of this appraisal by the Board's engineer showed that a number of the unit prices used reflected the abnormal costs prevalent at the present time. A new appraisal was submitted, made by Day and Zimmerman, using prices that were more nearly normal. This appraisal showed a cost to reproduce new of \$930,020, and a present value, after deducting depreciation, of \$800,350. This latter appraisal has been checked by the engineers of the Board, and appears to be made up on a reasonable basis.

In addition to the exchange of stock referred to above, the newly formed company proposes to create a new mortgage of \$1,100,000 and approval is asked for the issue of bonds in the amount of \$600,000 thereunder.

To show the financial status of the consolidated company, if the proposed merger and consolidation had taken place on January 1st, 1917, in the manner set forth in the petition as amended under date of June 19th, 1917, there was submitted by the petitioners a constructed balance sheet as of the former date, which in condensed form is as follows:

<i>Assets.</i>		<i>Liabilities.</i>	
Plant	\$800,350	Funded debt	\$600,000
Working capital and other		Capital stock	300,000
current assets.....	263,337	Current liabilities	115,957
Investments	23,900	Optional reserves	8,988
		Surplus	62,642
<hr/>		<hr/>	
Total	\$1,087,587	Total	\$1,087,587

In the above the \$800,350 shown for Plant is the present value of the property, including an allowance of \$35,890 for materials, supplies and other working capital as shown by the valuation thereof hereinabove referred to. To the extent of \$35,890 there

 Millville Gas Light Co. et al.—Approval of Merger, etc.

would clearly be a duplication in the first two items of the balance sheet. The latter fails to show any item for unamortized debt discount and expense, which, it is stated in the petition, would be approximately \$60,000, and in making up the above balance sheet this amount has been written off at once against surplus. By excluding the \$35,890 of working capital from the plant account and setting up thereunder the "value new" of the remaining property instead of its present value, the amount of accrued depreciation being shown as a separate item on the liabilities' side of the balance sheet, and setting up on the assets' side \$60,000 for unamortized debt discount and expense, the result will be as follows:

<i>Assets.</i>		<i>Liabilities.</i>	
Plant (or fixed capital) ..	\$894,130	Funded debt	\$600,000
Working capital and other		Capital stock	300,000
current assets.....	263,337	Current liabilities	115,957
Unamortized debt discount		Depreciation reserve	129,670
and expense	60,000	Optional reserve	8,988
Investments	23,900	Surplus	86,752
<hr/>		<hr/>	
Total	\$1,241,367	Total	\$1,241,367

On the liabilities' side the first three items, and on the assets' side the second item, remain the same. According to the testimony regarding the latter it is expected \$115,957 thereof will be used in liquidating floating debts of this amount, and the balance, over and above what is actually required for working capital, amounting to more than \$100,000, and consisting entirely of accounts receivable from the company which has built the greater part of the plant now in use, and is at the present time under contract to make additions thereto, will make it possible to finance the latter to the extent of that amount without the issuance of more securities than the \$900,000 par value thereof included in the above balance sheet.

If there are thus at the present time \$100,000 of current assets which can be used for financing additions to the plant and equipment covered by the inventory, upon which the proposed merger and consolidation is to be based, it would seem that these assets ought to be available also for the same purpose as that for which it is now proposed to issue bonds and stock. By reducing the amount of the latter \$100,000, and using current assets in place of the proceeds therefrom, the following balance sheet will result:

 Millville Gas Light Co. et al.—Approval of Merger, etc.

<i>Assets.</i>		<i>Liabilities.</i>	
Fixed capital	\$894,130	Funded Debt	\$600,000
Working capital and other current assets	163,337	Capital stock	200,000
Investments	23,900	Current liabilities	115,957
Unamortized debt discount and expense	60,000	Depreciation reserve	129,670
		Optional reserve	8,988
		Surplus	86,752
Total	\$1,141,367	Total	\$1,141,367

In the above balance sheet, working capital and other current assets are given as \$163,337. This should be used to pay off current liabilities amounting to \$115,957. This would leave a balance of \$47,380. In the appraisal there is included \$35,890 for materials and supplies and other working capital. Deducting this from \$47,380 leaves \$11,490 which may be used for financing further construction. Add to this the amount of \$23,900 which, it appears, has been invested in stock of the Electric Company, we have a total of \$35,390 available for future construction work.

Among notes receivable are loans made to the Water Company by the Gas Company amounting to \$52,740. There does not appear to be warrant for the investment by the Gas Company in stocks or notes of the Electric Company and the Water Company, and the Board will not at this time approve the issue of securities which would, in effect, refund securities issued, the proceeds of which had been used in such transactions.

Stocks, bonds or other securities of other companies held by the Millville Gas Light Company are "property" in the sense referred to in that section of the Public Utility Act in which a public utility is forbidden to dispose of its "property" without the approval of the Board. At the earliest practicable moment the securities now held by the Gas Company of other companies should be sold and the proceeds used for proper financing of the Gas Company, but before disposing of such proceeds petition must be made to the Board and proper consideration given thereto.

All the bonds of the Millville Gas Light Company at present outstanding were issued on July 1st, 1910, just three days prior to the effective date of the act requiring approval of the Board of Public Utility Commissioners for the issuance of securities. These bonds were handed over to a trustee for issuance from time

Millville Gas Light Co. et al.—Approval of Merger, etc.

to time in payment for construction work which has not all been completed at the present time, although more than seven years have passed since the date of this issuance.

The action of the Millville Gas Light Company on July 1st, 1910, apparently was an attempt to evade the law which was to take effect three days later requiring approval by the Board of Public Utility Commissioners of issues of securities. There seems to be no reason why the company should not have waited until after July 4th and applied for the Board's approval of the issue unless it was in doubt as to its ability to justify it to the satisfaction of the Board.

Chapter 195 of the Pamphlet Laws of 1911, which became effective May 1st of that year, provides that the Board of Public Utility Commissioners shall approve the purpose of issues of securities authorized by it.

Funds obtained from the proceeds of the bonds referred to were used for the purpose of constructing mains in the Borough of Vineland paralleling the existing mains of a company against which there does not appear to have been reasonable complaint as to rates or service.

If the Millville Gas Light Company had not taken in 1910 the precipitate action referred to, and if application had been made to the Board for its approval of issues of the company's securities at times when the amounts proposed appeared to be reasonable, it is probable that, in material part thereof, such securities would have come within the purview of the act of 1911. Had this been the case it would have been the Board's duty to consider the purpose of the issue and approve it, before authorizing such issue. In this event, such consideration would have brought before the Board a question of similar purport to that considered later in the application of the Consumer's Gas Company of Millville for approval of an ordinance of that city. In that case a new gas company was seeking to lay parallel mains throughout the City of Millville and applied to the Board for its approval of the competing franchise. It appeared that the existing company was furnishing adequate and proper service at reasonable rates and that no benefit would result from the proposed competition, and the application was denied.

Millville Gas Light Co. et al.—Approval of Merger, etc.

It appears that one of the subsidiary companies of the Millville Gas Light Company, the Citizens Gas Company of Vineland, expended upwards of \$47,000 in laying mains in Vineland. It may be that some of these mains were laid prior to the decision of the Board above mentioned in April, 1913, but a very large proportion were laid after that decision was rendered. Upon the record before us, we are not satisfied that approval covering such expenditures should be given and will withhold approval of issues of securities covering such expenditures.

CONCLUSIONS.

(1) The Board will give its approval to the consolidation of the companies referred to in this report, upon filing of executed copies of the agreements of merger and consolidation with proof of notice to stockholders and compliance with statutory requirements.

(2) The Board will not approve the amount of securities which would result in refunding securities to which the Board would not have originally given its approval.

(3) The Board will approve the issue of stock in the amount of \$200,000 in exchange for a like amount of stock of the Millville Gas Light Company.

(4) The Board will approve the proposed mortgage in the amount of \$1,100,000.

(5) The Board will approve the issue of bonds under the new mortgage of a par value of \$600,000, these bonds to be issued at not less than 90 per cent. of par.

(6) A suspense account must be set up by the company to cover the amount of debt discount and expense; same to be written off from earnings during the term of the bonds.

Dated July 16th, 1917.

North Jersey Rapid Transit Co.—Increase in Rates.

No. 450.**IN THE MATTER OF THE APPLICATION OF HENRY H. PARMELEE,
RECEIVER NORTH JERSEY RAPID TRANSIT COMPANY, FOR
APPROVAL OF INCREASE IN RATES.**

1. Application is made for approval of an increase in rates by a street railway. Investigation shows that the company's revenues are not sufficient to pay the operating expenses and interest on bonds.

2. The actual cost of construction is approximately equal to the funded debt.

3. No salaries have been paid to any administrative officials other than the superintendent and the operations of the road have been conducted economically.

4. Comparison of rates charged per mile shows that the company's rates have been less than those charged by many of the interurban railroads, which in the past two years have found it necessary to increase from a general basis of 1.67c. per mile to a 2c. basis. An increase of from five to six cents in each fare zone is allowed.

William B. Gourley, for the petitioner.

Under date of June 2d, 1917, Henry H. Parmelee, Receiver North Jersey Rapid Transit Company, filed with the Board a petition asking for approval of an increase in fares charged on the line of the North Jersey Rapid Transit Company.

It appears that the North Jersey Rapid Transit Company was organized under the act concerning railroads, and built a high speed electric interurban line between a point in the County of Bergen, just east of the City of Paterson, at the eastern end of the Broadway Bridge over the Passaic River, northward through Fairlawn, Glen Rock, Ridgewood, Hohokus, Waldwick, Allendale, Ramsey and Mahwah to Suffern, New York, about one-half mile beyond the State line. The company began business about seven years ago and it was expected at one time that the line would be extended southwardly to connect with one of the railroads running into Jersey City. Owing to the location of the road, and the fact that it is partly paralleled by the main line of the Erie Railroad, the company has been unable to pay the interest upon its bonded debt and has been in the hands of a receiver for several years. The deficit at the end of the year 1916, after six years of operation, amounts to \$151,546.

The following—Table A—shows the results of operation in 1911-1916:

North Jersey Rapid Transit Co.—Increase in Rates.

TABLE A.
North Jersey Rapid Transit Company—Income Account.

	1911	1912	1913	1914	1915	1916
Operating revenues	\$48,523.56	\$62,002.51	\$63,322.84	\$62,586.38	\$58,968.25	\$54,246.17
Operating expenses	37,709.73	37,068.47	39,092.72	43,303.93	42,312.31	41,102.68
Gross income less operating expenses.....	\$10,813.83	\$24,934.04	\$24,230.12	\$19,282.45	\$16,655.94	\$13,143.49
Deductions from income—						
Taxes	\$3,698.51	\$5,357.28	\$6,414.86	\$5,443.14	\$5,659.85	\$5,958.50
Interest	24,132.65	39,999.99	40,000.00	40,000.00	40,000.00	40,000.00
Rent of leased lines.....	.....	.....	.....	588.14	643.28	613.55
Total deductions	\$27,831.16	\$45,357.24	\$46,414.86	\$46,031.28	\$46,303.13	\$46,572.05
Net loss	17,017.33	20,423.20	22,184.74	26,748.83	29,647.19	33,428.56
Deficit for year.....	\$17,017.33	\$20,423.20	\$22,184.74	\$26,748.83	\$29,647.19	\$33,428.56
Deficit at beginning of year.....	1,731.33	15,286.00	39,434.29	61,622.67	88,471.00	118,118.19
Deficit at close of year.....	\$15,286.00	\$35,709.20	\$61,619.03	\$88,371.50	\$118,118.19	\$151,546.75
Profit or loss adjustment during year.....	.....	3,725.09	3.64	99.50	.....	.....
Deficit at close of year.....	\$15,286.00	\$39,434.29	\$61,622.67	\$88,471.00	\$118,118.19	\$151,546.75
Capital stock	800,000.00	.....	.....	.....	.....	.....
Funded debt	800,000.00	.....	.....	.....	.....	.....

North Jersey Rapid Transit Co.—Increase in Rates.

From the above it is evident that the revenues of the company are not sufficient to pay the operating expenses and interest on the bonds. In Table A it should be noted that interest on outstanding bonds is included. The funded debt is \$800,000, and testimony was submitted at the hearing to the effect that the actual cost of construction was approximately that sum. Including interest on bonds, not compounded, the total deficit to January 1st, 1917, amounts to \$151,546. The total interest payable for the same period is \$224,132, leaving an amount of \$72,586 which has been available for the payment of interest, although no interest has ever actually been paid.

No salaries have been paid to any administrative officials other than the superintendent, and the operations of the road have been conducted economically.

The financial statement in Table A shows the necessity for an increased revenue. Analysis shows that revenue has increased, but there has been a greater proportional increase in the cost of operation.

The fare charged on this road is at the rate of 5 cents for each of five zones, making a charge of 25 cents for the through trip in either direction. The company proposes to increase the fare charge in each zone to 6 cents, but without in any way changing the present arrangement of zones. This will result in a charge of 30 cents for the whole ride from Paterson to Suffern. Figures were submitted showing a comparison between the rates now charged on the Erie Railroad and those proposed for the North Jersey Rapid Transit Company. In one or two instances the proposed rates are somewhat higher than those charged by the Erie, but in the majority of cases the proposed rates are less than those now charged by the Erie.

North Jersey Rapid Transit Co.—Increase in Rates.

TABLE B.
Comparison of Rates—Erie R. R. Co. and N. J. R. T. Co.

	PATERSON.		GLEN ROCK.		RIDGEWOOD.	HOHOKUS.	WALDWICK.	ALLENDALE.	RAMSEY.	MAHWAH.	SUFFERN.		
	Single.	Return.	Single.	Return.	Single.	Return.	Single.	Return.	Single.	Return.	Single.	Return.	
Ridgewood	15	25	05	10									Erie.
	17	34	08	12									N. J. R. T. New.
	15	30	06	10									" Old.
Hohokus	20	35	10	15	05	10							Erie.
	17	34	08	12	08	12							N. J. R. T. New.
	15	30	05	10	05	10							" Old.
Waldwick	20	40	10	20	10	15	05	10					Erie.
	23	46	12	24	06	12	06	12					N. J. R. T. New.
	20	40	10	20	05	10	05	10					" Old.
Alendale	25	45	15	30	11	20	10	15	05	10			Erie.
	23	46	12	24	12	24	06	12	06	12			N. J. R. T. New.
	20	40	10	20	10	20	05	10	05	10			" Old.
Ramsey	30	55	20	35	16	30	15	25	10	15	05	10	Erie.
	29	58	18	36	12	24	12	24	06	12	06	12	N. J. R. T. New.
	25	50	15	30	10	20	10	20	05	10	05	10	" Old.
Mahwah	35	60	23	45	25	45	30	35	15	25	10	15	Erie.
	35	70	24	48	18	36	12	24	06	12	06	12	N. J. R. T. New.
	30	60	20	40	15	30	10	20	10	20	05	10	" Old.
Suffern	40	70	25	50	28	50	25	45	35	15	25	05	Erie.
	35	70	24	48	24	48	18	36	12	24	12	24	N. J. R. T. New.
	30	60	20	40	20	40	15	30	10	20	10	20	" Old.

NOTE.—Paterson rates on N. J. R. T. include 5 cents over city line.

Northampton, Easton and Washington Traction Co.—Increase in Rates.

The average rate for the various zones is now about 1.97 cents per mile; the rate for the longer ride is at approximately 1.7 cents per mile. On the new basis the charge will be about 2.05 cents per mile.

CONCLUSIONS.

The earnings and expenses show beyond question that the North Jersey Rapid Transit Company has been operating on too low a basis of fares. A comparison of the rates charged per mile shows that the company's rates have been less than those charged by many of the interurban railroads, which in the past two years have found it necessary to increase from a general basis of 1.67 cents per mile to a 2-cent basis.

In view of all the testimony, the Board will allow the new schedule to be filed providing for a charge of six cents (6c.) for passage over each fare zone in either direction.

Dated July 16th, 1917.

No. 451.

IN THE MATTER OF THE APPLICATION OF NORTHAMPTON, EASTON
AND WASHINGTON TRACTION COMPANY FOR APPROVAL OF
INCREASE IN RATES.

1. Ordinances of the several municipalities through which a street railway operates fix rates of fare to be charged. Application is made to increase the fares beyond those fixed by the ordinances.

2. In the case of *Atlantic Coast Electric Railway Co. v. Board of Public Utility Commissioners*, 99 *Atl. Reporter*, p. 395, the Supreme Court held "The municipality under the legislative authority may impose, as a condition of its consent to the location of tracks within its corporate limits, the rate of fare that shall be charged and such restriction, when the ordinance is accepted, becomes a contract. * * * Such a contract neither party can violate without the consent of the other. Should the company apply to the Utility Board to have the rate of fare increased it would undoubtedly be met with its contract." The Board holds that under this decision the application must be denied.

 Northampton, Easton and Washington Traction Co.—Increase in Rates.

T. A. H. Hay, for the company.

Lewis W. Lanning and Oscar Jeffrey, for Franklin Township.

This is an application made by the Northampton, Easton and Washington Traction Company to increase the rates of fare from five cents to six cents in each of the fare zones in which the company operates. The following is a list of the fare zones with the fares now applicable and those proposed.

<i>Fare Zones.</i>	<i>Present Rate.</i>	<i>Increased Rate.</i>
Phillipsburg, N. J., to Ingersoll Bridge.....	5c	6c
Ingersoll Bridge to Dowling's Crossing.....	5c	6c
Dowling's Crossing to Edison Road.....	5c	6c
Edison Road to Belvidere Road.....	5c	6c
Belvidere Road to D. L. & W. R. R. Arch (Washington)	5c	6c
D. L. & W. R. R. Arch to Silver Spring.....	5c	6c
Silver Spring to Port Murray (Terminus).....	5c	6c

This road runs from Phillipsburg to Port Murray, a distance of about seventeen miles. The fare between the termini mentioned is thirty-five cents one way, and the increase asked for would make it forty-two cents one way.

The road was built in 1906 and is admittedly largely over capitalized, but is claimed to have a value of \$862,584.00 as of April 21st, 1911. There is an outstanding bonded indebtedness of \$739,000.00 bearing 5% interest.

The gross receipts of the company for the year 1916 amounted to \$70,130.57, which is the largest in its history, and is an increase of \$9,533.67 over the previous year, but it is claimed that owing to the large percentage of wage increase and to the fact that the cost of all materials necessary for the operation of the road has largely increased the net earnings of the company are constantly growing less. Exhibit P-3 of the petitioner shows a deficit of \$7,150.34 for the year 1915, and a deficit of \$5,311.32 for the year 1916, exclusive of any depreciation charge on equipment, track and roadway.

The conclusion reached by us has made a detailed verification of these figures unimportant, and they are only accepted for the purposes of this report.

Northampton, Easton and Washington Traction Co.—Increase in Rates.

This company, which was organized under the Traction Act, applied for, and was granted, various ordinances from the municipalities through which it runs. In the ordinance passed by the Borough of Washington it was provided:

"Section 11. The company shall not charge more than five cents for a single fare for a continuous ride between any two points within the borough limits upon the routes described in this ordinance. The fare from Washington to the Edison Portland Cement Company's works now being constructed at New Village, New Jersey, shall not exceed the fare charged by the company from the said works to Phillipsburg, N. J."

In the ordinance passed by the Township of Washington it was provided:

"Section 10. The company shall not charge more than five cents for a single fare for a continuous ride between any two points within the township limits, upon the routes described in this ordinance."

In the ordinance passed by the Township of Franklin it was provided:

"Section 10. The company shall not charge more than five cents for a single fare for a continuous ride between any two points within the township limits, upon the routes described in this ordinance."

In the ordinance passed by the Township of Lopatcong it was provided:

"Section 10. The company shall not charge more than five cents for a single fare for a continuous ride between any two points within the township limits, upon the routes described in this ordinance."

In this ordinance passed by the Town of Phillipsburg, it was provided:

"Section 13. The said street railway company shall not charge more than five cents for a single fare for a continuous ride between any two points within the present or any future limits of the Town of Phillipsburg, and the City of Easton, upon the route described in this ordinance, or upon any routes hereafter owned, controlled, operated, used, run over or managed by said company."

Northampton, Easton and Washington Traction Co.—Increase in Rates.

In the case of the *Atlantic Coast Electric Railway Company v. Board of Public Utility Commissioners*, 99 *Atl. Rep.* p. 395, the Supreme Court held:

"When a traction company organized under the general traction act of 1893 obtains from a municipality an ordinance granting a location of street railway tracks, and accepts the same, a regulation of the rate of fares contained therein, if lawful and reasonable, constitutes a contract between the company and the municipality which during the life of the franchise remains inviolable."

"The municipality under the legislative authority may impose, as a condition of its consent to the location of tracks within its corporate limits, the rate of fare that shall be charged and such restriction, when the ordinance is accepted becomes a contract." * * * "Such a contract neither party can violate without the consent of the other. Should the company apply to the Utility Board to have the rate of fare increased, it would undoubtedly be met with its contract." (*Ibid.*)

This decision of our Supreme Court we regard as binding upon us, and the application is denied.

Dated July 16th, 1917.

ORDER.

This matter having been heard and considered by the Board, and the Board having, on the 16th day of July, 1917, made and filed a report stating its findings of fact and conclusions thereon, which said report hereby referred to is made part hereof,

It is, on this 14th day of August, 1917, ORDERED that the application of the Northampton, Easton and Washington Traction Company to increase its rates of fare be and the same hereby is DISAPPROVED, and the Northampton, Easton and Washington Traction Company be and hereby is

ORDERED AND DIRECTED to continue without change the rates for transportation over its line between points in the State of New Jersey now in effect.

This order shall become effective immediately.

Dated August 14th, 1917.

An appeal from this decision was taken to the Supreme Court, which filed the following decision:

Northampton, Easton and Washington Traction Co.—Increase in Rates.

New Jersey Supreme Court.
November Term, 1917, No. 222.

NORTHAMPTON, EASTON AND WASHINGTON TRACTION CO.

v.

BOARD OF PUBLIC UTILITY COMMISSIONERS.

CERTIORARI.

Before Justices Swayze, Trenchard and Minturn.

Per Curiam.

The prosecutor asked the consent of the Public Utility Commissioners to increase the fares in each fare zone from five to six cents. It was shown to the satisfaction of the Commission that the street railway was being run at a loss each year even without making the necessary allowance for depreciation. Obviously in such a situation the prosecutor could not perform its public duty to furnish safe, adequate and proper service and to keep and maintain its property and equipment in such condition as to enable it to do so. P. L. 1911, sec. 17 b. The Commission thought that this duty was of inferior obligation to what it conceived was an irrepealable contract in favor of inferior branches of the State government—the municipalities through which the railroad runs. We are unable to take that view. Our reasons are stated in the opinion filed in *Collingswood Sewerage Co. v. Borough of Collingswood*. The order is set aside and the case remitted for further proceedings. No costs are allowed.

This result probably makes it unnecessary to decide No. 223. As to that we will hear counsel if they wish to be heard.

An appeal from the foregoing decision of the Supreme Court has been taken to the Court of Errors and Appeals, and at the time of the publication of this volume the matter is before the latter court.

Horace J. Malott v. Wildwood and Del. Bay Short Line R. R. Co. et al.

No. 452.**IN THE MATTER OF THE COMPLAINT OF HORACE J. MALOTT VS.
WILDWOOD AND DELAWARE BAY SHORT LINE RAILROAD CO.
AND THE ATLANTIC CITY RAILROAD CO. IN RE INADEQUATE
SERVICE.**

1. The summer excursion ticket from Philadelphia and Camden to Wildwood and return is sold for \$1.00 for the purpose of giving the people of these cities daily opportunity to visit the beach at small expense. This privilege is enjoyed by crowds of from 500 to 700 daily. It cannot reasonably be required that this large number of people, eager to reach their destination, should be inconvenienced and delayed to accommodate a few persons who may occasionally desire to visit Wildwood Annex.

2. Considering the limited number of passengers between Wildwood and Wildwood Annex and the meagre sum received from their transportation a fare of seven cents has not been shown to be unreasonable.

Herbert F. Harris, for complainant.

J. Fithian Tatem, for Wildwood and Delaware Bay Short Line Railroad Company.

French & Richards, for Atlantic City Railroad Company.

The complaint charges that the Wildwood and Delaware Bay Short Line Railroad Company and the Atlantic City Railroad Company fail to provide adequate train service at Wildwood Annex; and also that the fare from Wildwood Annex to Wildwood was increased in the year 1916 from 5 cents to 7 cents, with a round trip fare of 13 cents, which is alleged to be unjust and unreasonable.

The evidence shows that Wildwood Annex is a small development a little more than 6,600 feet west of Wildwood and within 1,500 feet of West Wildwood station; that Mr. Malott is the developer and promoter of the enterprise; that while between 300 and 400 persons have purchased lots on installment contracts and about 100 of the investors have paid the purchase price and

Horace J. Malott v. Wildwood and Del. Bay Short Line R. R. Co. et al.

received deeds for their lots, there is but one permanent resident for the entire year and only eight small bungalows, occupied for a few weeks in the summer.

All passenger trains over this railroad stop at Wildwood Annex on notice to the conductor, excepting the one daily summer excursion train between Camden and Wildwood. This train is usually composed of twelve or more coaches filled with passengers destined for Wildwood. The terminal of said railroad is Wildwood, and there is no complaint of the service between Wildwood and Wildwood Annex, except the petition alleges that persons from Camden and Philadelphia desiring to go to Wildwood Annex are obliged to wait an unreasonable time at the Wildwood station.

Considering the present train schedules and the limited number of passengers this complaint is not well founded. The summer excursion ticket from Philadelphia and Camden to Wildwood and return is sold for \$1.00 for the purpose of giving the people of those cities daily opportunity to visit the beach at small expense. This privilege is enjoyed by crowds of from 500 to 700 daily. It cannot reasonably be required that this large number of people, eager to reach their destination, should be inconvenienced and delayed to accommodate a few persons who may occasionally desire to visit Wildwood Annex. Under all the circumstances, we believe the public is best served by the running of the said excursion trains with as few stops as possible and that this Board would not be warranted, under existing conditions, in ordering the said train stopped at Wildwood Annex.

Referring to the 7-cent fare between Wildwood and Wildwood Annex, it must be borne in mind that while there are but few railroads which charge more than 5 cents from stations so close together, yet Section 38 of the Act Concerning Railroads provides that "any railroad company may demand and receive * * * three cents per mile for carrying each passenger on such railroad * * * but no charge shall be required to be less than ten cents," etc. Considering the limited number of passengers between the said two points and the meagre sum received from such transportation, the existing fare has not been shown to be unreasonable, and the Board will not disturb it.

The petition will be dismissed. An order will so enter.

Dated July 17th, 1917.

West Jersey and Seashore Railroad Co.—Change Location of Station.

ORDER.

This case being at issue upon complaint and answers on file, and having been duly heard and submitted by the parties, and full investigation of the matters and things involved having been had, and the Commission having, on the date hereof, made and filed a report, containing its findings of fact and conclusions thereon, which said report is hereby referred to and made a part hereof,

IT IS ORDERED that the complaint in this proceeding be, and it is hereby, DISMISSED.

Dated July 17th, 1917.

No. 453.

IN THE MATTER OF THE APPLICATION OF THE WEST JERSEY AND
SEASHORE RAILROAD COMPANY FOR PERMISSION TO CHANGE
THE LOCATION OF THE TOWNSEND'S INLET PASSENGER
STATION.

1. In determining whether the location of a station should be changed the Board will consider among other things the convenience of property owners who have purchased land and located residences under the impression that the station site would remain as located unless some condition of development necessitated its removal to best serve the residents of the community.

2. In the absence of proof that a proposed new location possesses advantages the present location does not and cannot afford, the Board recommends that the station be maintained at its present location.

D. T. Easbey and *J. R. Helm*, for the railroad company.

R. W. Cronecker, for Sea Isle City.

H. F. Harris, for those opposed to moving the station.

R. W. Hadden, for those in favor of moving the station.

West Jersey and Seashore Railroad Co.—Change Location of Station.

This case involves change of location of station site and construction of a shelter at Townsend's Inlet on the Stone Harbor Branch of the West Jersey and Seashore Railroad in Cape May County. The need of a shelter is recognized by the Railroad Company, but it is apparently unwilling to construct the shelter until it is determined at what point it should be located. The position of the Railroad Company is set forth in the petition, viz.:

"The Railroad Company desires to furnish the shelter building asked for and is willing to place it at Roberts Avenue or remove the platform to the location between Cedar and Rose Avenues and place the shelter building there, but believes that either action on its part will not give satisfaction to all of the people interested in the location of this station, and therefore feels that the matter should be submitted to the Board and decision reached after such investigation or hearing as the Board may feel the subject warrants."

To determine the attitude of the residents of Townsend's Inlet, afford an opportunity for the expression of views regarding proposed change of station location, and to secure the necessary testimony to determine the matter, a hearing was held at Sea Isle City, of which Townsend's Inlet is a part. Notice of the hearing was posted on the station platform and communications were addressed to interested parties, who filed communications with the Board regarding the proposed change.

The station facilities at Townsend's Inlet consist of an open platform on Roberts Avenue. The proposed location is between Rose Avenue and Cedar Avenue, about five hundred feet northeast of present location.

The railroad through Sea Isle City runs in a southwesterly direction, along the easterly or beach side, and reaching Townsend's Inlet, curves sharply to the west from Cedar Avenue. Roberts Avenue runs practically north and south about the center of the Inlet, and is unimproved south of the railroad tracks. Cedar Avenue runs east and west near the northerly boundary of the Inlet. All the residences are located west of the easterly end of Cedar Avenue where it intersects the railroad, and Roberts Avenue about divides the municipality, with the majority of the residences located west of this highway. Storm Avenue runs east and west from the southerly line of the built-up portion of the

West Jersey and Seashore Railroad Co.—Change Location of Station.

Inlet, and intersects Roberts Avenue at the present platform site. There is no crossing of the tracks at this point. Houses are located on the northerly side of Storm Avenue west of the railroad tracks, but no residences are located east of the tracks on Storm Avenue, or south of Storm Avenue.

The Inlet Post Office is located in one of the general stores on Roberts Avenue, near the present station site, and considering the accessibility of the Post Office to persons calling for mail going to and from trains, it would appear that the present site has an advantage over the proposed site near Cedar Avenue. The Inlet Hotel is located on the northwest corner of Roberts Avenue and Storm Avenue directly across from the present station site, and the retention of the station at said point would be convenient for its patrons.

Being a non-agency station, the protection of freight and baggage should be considered as it is an important factor in determining the question of permanent location. It appears that the postmaster and proprietor of the hotel takes care of freight and baggage left on the platform, and no testimony having been adduced to show the manner in which freight could be equally protected at the proposed site, this condition is an additional reason for maintaining the station at its present location.

For over twenty years the station site has been maintained at Roberts Avenue, and being requested to determine a question affecting the interests of the residents of the Inlet, the Board will consider, among other things, the convenience of property owners who have purchased land and located residences under the impression that the station site would remain as at present located, unless some condition of development necessitated its removal to best serve the residents of the community.

The population of the Inlet varies considerably as between the summer and winter seasons, being greater during the summer months. It appears that the majority of the homes of all-year residents are located near the present station, and as they would be more conveniently served, they naturally desire the station maintained at its present location.

It further appears that the construction of the shelter on Rob-

West Monmouth Water Co.—Issue of Bonds.

erts Avenue requires the use of a portion of the highway, and permission for such use would have to be obtained from the local authorities. The platform at Roberts Avenue extends across the highway and if the highway should be continued south of the right of way, and a crossing established over the tracks, the entire width of the avenue would be required for highway purposes. There are no residences south of the tracks, and under present conditions the probabilities are that Roberts Avenue will not be extended as a highway. Should occasion arise, due to the development of the community, making it necessary to use the territory south of the tracks, the shelter could be moved to the proposed site: and if such development did occur, a station building in all probability would be required instead of a shelter.

In the absence of proof that the proposed location possesses advantages which the present location does not and cannot afford, and the present location apparently being satisfactory to the majority of the residents of the Inlet, the Board will recommend that the Railroad Company construct the shelter and maintain its station on Roberts Avenue. As permission will be required from the governing body of the municipality to permit the use of a portion of Roberts Avenue for a station site, if said permission is not granted, the Board will permit the Railroad Company to change the location of the station from Roberts Avenue to the proposed location near Cedar Avenue.

Dated July 25th, 1917.

No. 454.

IN THE MATTER OF THE APPLICATION OF THE WEST MONMOUTH
WATER COMPANY FOR PERMISSION TO ISSUE \$8,000 FIRST
MORTGAGE 6% BONDS.

William J. Lausley, for petitioner.

Butler Water Co.—Issue of Bonds and Stock.

Application is made by The West Monmouth Water Company for approval of the issue of \$8,000 bonds to cover expenditures heretofore made. The Board approves the purpose of the issue.

Heretofore we have approved the issue of \$5,000 of stock and \$12,000 of bonds. The present issue would result in a capitalization of \$20,000 bonds and \$5,000 stock. We are of opinion that there should be more stock issued in an enterprise of this kind. We will approve the issue of \$6,000 bonds and \$2,000 stock if the application is amended to petition therefor.

Dated July 25th, 1917.

No. 455.

IN THE MATTER OF THE APPLICATION OF THE BUTLER WATER COMPANY FOR APPROVAL OF ISSUE OF FIVE THOUSAND DOLLARS (\$5,000) BONDS AND TEN THOUSAND DOLLARS (\$10,000) STOCK.

Application is made for approval of issues of securities including \$8,000 par value capital stock "For promotion, engineering and general supervision for the past 3 years and 3 months." Approval of this item is withheld until more specific testimony is produced indicating what allowance should be charged against capital.

Thomas J. Hillery, for the company.

Under date of June 15th, the Butler Water Company submitted a petition for approval of an issue of bonds to the amount of \$5,000, and an issue of 100 shares of its capital stock par value \$100 each, amounting to \$10,000, it being stated that these amounts represented assets against which no securities have as yet been issued.

The principal items in the application are as follows:

Butler Water Co.—Issue of Bonds and Stock.

Amount of money expended for new developments to	
January 1st, 1917.....	\$41,060.01
For extensions from January 1st, 1917, to June 1st,	
1917	1,202.83
Purchase of automobile.....	422.00
Current bills for new development.....	250.00
Pipe system to be purchased by company.....	750.00
Expense of development on Capitoline Hill (con-	
templated)	1,850.00
Unpaid bills for promotion, engineering and general	
supervision for the past 3 years and 3 months.....	8,000.00
	<hr/> \$53,534.84
Appraisal made by Board, March 1st, 1916—	
Amount expended to March 1st, 1916 (Apshawa).....	\$20,429.00
For completion of same (estimated).....	13,000.00
For Valley Road and other extensions in Butler.....	5,000.00
	<hr/> 38,429.00
Difference	\$15,105.84

The expenditures for additions to the physical property have all been checked by engineers representing the Board. Testimony at the hearing, submitted by W. L. MacCue, president of the company, was explanatory of the item of "Unpaid bills for promotion, engineering and general supervision for the past 3 years and 3 months, \$8,000." Of this amount, \$4,500 represented a bill presented by Mr. MacCue for services, largely legal in character. There had been several applications to the Water Supply Commission which involved attendance at hearings in Trenton and in Butler, and investigations of numerous property titles, and it was testified that Mr. MacCue's office had been given over for the almost exclusive business of the Water Company for more than three years. It is impossible from the testimony to divide the charge between operation and capital accounts.

Very little testimony was submitted concerning the balance of the \$8,000. A bill for \$2,000 had been presented by the members of the executive committee for services in connection with general supervision of the construction of the company, and for services rendered in carrying on negotiations for the financing of the company. Another bill for \$1,500 was submitted by another member of the board of directors, who had rendered services in securing the franchise rights in Bloomingdale.

Some of the items referred to above are chargeable to capital

Bridgeton Electric Co.—Approval of Increased Rates.

account, but it must be remembered that the Butler Water Company has been a going concern, and that much of the new construction carried on in the past two years has been in the nature of reconstruction, due to the necessity for obtaining another and more adequate water supply. Much of the work of negotiation carried on by Mr. MacCue was due to the transfer to new owners of the Butler Water Company, which took place on the death of the former owner of the company's stock.

After full consideration of all the matters involved in this application, the Board is of the opinion that a policy of conservatism should be adopted by the Butler Water Company with regard to increases in its capital securities due to the present large investment per unit of output, made necessary by the conditions under which the company operates.

As to the item of \$8,000 the Board withholds approval until more specific testimony is produced indicating what allowance should be charged against capital. Approval will, if desired, be given to an issue of bonds in the amount of \$2,000, and stock in the amount of \$5,000, for the other capital purposes referred to in the petition, excepting the item of \$8,000 above mentioned.

Dated August 7th, 1917.

No. 456.

IN THE MATTER OF THE APPLICATION OF THE BRIDGETON ELECTRIC COMPANY FOR APPROVAL OF PROPOSED INCREASE IN RATES.

1. An increase in charge of 1 per cent. for each 10 cents increase per ton in the cost of coal over \$3.50 does not appear to be warranted. Where current is sold at very low rates, as is the case with current furnished the street railway and large power users, the proportionate increase in cost due to increased cost of coal is higher.

2. The increased cost of supplying the customer who has been paying 10 cents per kilowatt hour has not exceeded 15 per cent.

3. The application of the proposed schedule to the small retail customer would result in an increase of 37½ per cent. The increased cost of serving the large power users obtaining current at 3 cents per kilowatt hour has amounted

Bridgeton Electric Co.—Approval of Increased Rates.

to 50 per cent. A schedule to make allowances for increases in cost of coal must conform more nearly to the actual increase in cost to the various classes of consumers.

C. L. S. Tingley and *H. B. Gill* appeared on behalf of the company.

Under date of June 21st the Bridgeton Electric Company filed, with the purpose of becoming effective July 1st, 1917, the following amendment of rates for electric service:

"The company shall at the end of each calendar month ascertain the average cost of coal delivered at the power house at Bridgeton for that month, and shall add to the consumer's bill one per cent. thereof for each ten cents per ton of cost of coal in excess of \$3.50 per ton, f. o. b. Bridgeton (the average prevailing price prior to June 30th, 1916), and shall deduct from consumer's bill one per cent. thereof for each ten cents per ton of cost of coal below \$3.50 per ton, f. o. b. Bridgeton."

By order dated June 26th, 1917, the Board suspended the increased charge, and called a hearing on the matter for the 6th of July at the State House in Trenton.

The Mayor of Bridgeton was notified of the hearing.

At the hearing testimony was submitted as to the cost of the property of the company, and its capitalization. An exhibit was submitted and testimony given by Mr. Tingley as to the operating expenses and earnings of the company.

The burden of the testimony was that the cost of operation has increased, due almost entirely to the increase in the charges for coal, and that not only has the cost of the coal itself increased, but also the cost of getting the same into the storage bins of the company.

Up until recently coal was brought to Bridgeton in barges, and coal handling apparatus was arranged for taking the coal from the barges and delivering it into the storage bins. During the last few months it has been impossible to obtain coal in this way, and all coal has been delivered by rail and hauled by carts from the freight yards to the power station.

Detailed testimony with regard to the cost of coal showed that the coal delivered at the power station in Bridgeton had cost as follows:

 Bridgeton Electric Co.—Approval of Increased Rates.

1904.....	\$3 40
1905.....	3 42
1906.....	3 29
1907.....	3 32
1908.....	3 37
1909.....	3 45
1910.....	3 30
1911.....	3 31
1912.....	3 35
1913.....	3 33
1914.....	3 60
1915.....	3 53
1916.....	3 70

It was testified that contracts had been made for the supply of coal to Bridgeton, but that no coal had been received under such contracts for some time past, and the prices paid have varied considerably.

The average price at the mine for the coal sent to Bridgeton in the first five months of 1917 was \$5.16. In addition to the higher price for coal, the cost of delivering this coal at Bridgeton from the mine, including the delivery in the power plant, was \$2.05. During the month of May, 1917, the price paid for coal was \$6.25 at the mine, plus \$2.05 for freight and delivery. The last price paid, about three weeks prior to the date of the hearing, was \$5.65 plus cost of freight and delivery.

The increase in the cost of coal results in a material increase in the total cost of furnishing electric service, and might result eventually in a deterioration in the character of service.

The testimony submitted at the hearing showed that no more than a fair return is being obtained on the invested capital of the company.

The effect of the proposed increase would be shown by the following:

During the first months in 1917 the cost of coal delivered in Bridgeton was approximately \$7.25 per ton. This is \$3.75 in excess of the average price of coal prior to June 30th, 1916, and the application of the rate would result in an increase of 37½% in all bills for electric light and power.

There is much newspaper discussion of an agreement by which all operators are to charge the price of \$3.00 at the mine for

• Bridgeton Electric Co.—Approval of Increased Rates.

steam coal. The outcome is, of course, not certain, but it was shown that under present conditions this would mean a cost to the Bridgeton Company of \$5.05 for coal delivered at Bridgeton. The application of the proposed rate would mean an increase of 15.5% in all bills for electric light and power.

At the hearing, Mr. Tingley submitted a complete detailed statement showing the cost of generating current at the Bridgeton plant, and this shows that the switchboard cost for the first five months of 1916 was \$0.01286 per kilowatt-hour generated. The cost during the first five months of 1917 is \$0.02040 per kilowatt-hour generated, or an increase over the previous year of \$0.00754 per kilowatt-hour or 58.8%.

There have been other changes in the cost of furnishing service, and we find that the cost of fuel has varied widely. The cost of fuel for the first five months of 1916 was \$0.00965 per kilowatt-hour, and for the first five months in 1917 was \$0.01780, or an increase of 84.4%. This, it should be noted, refers to the cost of fuel per unit of energy generated at the switchboard. An increase of 10 cents in the cost of coal above \$3.50 would amount to an increase of 2.86% in the cost for fuel, or an actual increase in the cost for each kilowatt-hour generated of \$0.000276, based on the average gross revenue per kilowatt-hour sold, which is approximately 4½ cents. This amounts to an increase of six-tenths of one per cent. (0.6%) for each 10-cent increase in the cost of coal.

CONCLUSIONS.

An increase as proposed by the company of 1% for each 10-cent increase in the cost of coal over \$3.50, does not appear to be warranted by the figures given above.

Where current is sold at very low rates, as is the case with the current furnished the street railway and large power customers, the proportionate increase in cost due to increased cost of coal is higher. It is due to this fact that many companies in adopting a schedule which will take into account increases in fuel cost, have applied such schedules to the large power customers only. The additional cost of service due to increases in coal cost is not pro-

Bridgeton Electric Co.—Approval of Increased Rates.

portional to the rate charged, but to the fuel portion of the cost. The actual cost of fuel, measured in terms of kilowatt-hours sold, has ranged with the Bridgeton Company from about $1\frac{1}{2}$ cents to 3 cents per kilowatt-hour.

The increased cost of supplying the customer who has been paying 10 cents per kilowatt-hour has not exceeded 15%. The application of the proposed schedule to the small retail customer would result in an increase of $37\frac{1}{2}\%$, on the basis of the figures for the first five months of 1917, as compared with the same period of 1916.

Where the customer has been purchasing current for large power purposes at an average cost to him of 3 cents, the increased cost to the company has amounted to the same $1\frac{1}{2}$ cents per kilowatt-hour sold, or an increase of 50% in the cost of serving the large power customer. The same thing applies in the cost of electric power furnished the street railway company.

It follows from the above statements that to allow the increase of 1% for each 10-cent increase in cost of coal, and allow this to be charged to all customers, really amounts to undue and unjust discrimination; and assuming the present schedule of rates as charged by the Bridgeton Electric Company to be reasonable, it follows that the resulting schedule would be unjust and unreasonable, and excessive to the customer who pays the higher base rate.

A schedule to make allowances for increases in cost of coal must more nearly conform to the actual increase in cost to the various classes of consumers.

The Board will, therefore, deny approval of the proposed increase in rates as not being in the proper form, as it results in undue and unreasonable discrimination against the small consumer who pays the base rate.

Dated August 7th, 1917.

Electric Co. of New Jersey—Approval of Increased Rates.

No. 457.**IN THE MATTER OF THE ELECTRIC COMPANY OF NEW JERSEY
MAKING APPLICATION FOR APPROVAL OF PROPOSED IN-
CREASE IN RATES.**

C. L. S. Tingley, H. B. Gill and Wm. J. Mulholland, for the company.

In this matter, the Electric Company of New Jersey has filed the following proposed rule, to become effective July 1st, 1917:

"The company shall at the end of each calendar month ascertain the average cost of coal delivered at Bridgeton and Wilmington power houses for that month, and shall add to the consumer's bill one per cent. thereof for each ten cents per ton of the average cost of coal in excess of \$3.50 per ton, f. o. b. power house, such average price to be a true average and proportional to the amount of current received from Bridgeton and Wilmington respectively, and shall deduct from consumer's bill one per cent. thereof for each ten cents per ton of the average cost of coal below \$3.50 per ton, f. o. b. power house. Effective from July 1st, 1917."

Under date of June 26th the Board issued an order suspending the increase and setting the matter down for hearing on July 6th at the State House, Trenton.

While the costs of generating current in Wilmington are not quite the same as those for generating current in Bridgeton, the principles involved in a determination of this matter are similar to those laid down in a report bearing even date with this report, referring to a similar proposed change in the schedule of charges made by the Bridgeton Electric Company. Based on the same principles, the proposed changes are hereby declared to be unjust and unreasonable, and unduly discriminatory against the customer who pays the base rates, and the proposed schedule will not be filed.

Dated August 7th, 1917.

New Jersey Northern Gas Co.—Approval of Increased Rates.

No. 458.

IN THE MATTER OF THE APPLICATION OF THE NEW JERSEY
NORTHERN GAS COMPANY FOR APPROVAL OF INCREASE IN
RATES.

The testimony in support of an application for approval of increased rates fails to indicate how much additional revenue would probably result from the increases. Satisfactory proof is not afforded that the proposed service charge bears a proper relation to the cost of readiness to serve. Approval of the proposed schedule is withheld.

J. A. Riggins, for the petitioner.

Under date of June 25th, 1917, the New Jersey Northern Gas Company filed a petition with the Board citing the history of the company, stating that the rates in the territory supplied by it had been reduced at the time the company was formed by consolidation of the Flemington and Lambertville Gas Light Companies, and that a further reduction had been made on January 1st, 1915, this providing for a net rate of \$1.50 per thousand cubic feet of gas.

The company claims that owing to the increased cost of fuel and oil it is necessary to increase its revenue. A proposed change in the form of its rate schedule is admittedly with the idea of increasing the net revenue of the company.

It was testified that, in the neighboring section of Pennsylvania, gas is being served by another company in accordance with the rate which the New Jersey Northern Gas Company is now proposing to charge, and that there has not been any general complaint concerning this rate. Protests were received from the Borough Clerk of the Borough of Pennington, and a letter was also received from the Housewives' League of Flemington, objecting to the proposed increase in charges to the small customers.

The rate charged at the present time throughout the entire territory is \$1.60 per thousand cubic feet of gas, with 10 cents reduction for prompt payment. The proposed rate is made up

New Jersey Northern Gas Co.—Approval of Increased Rates.

of two parts; a fixed or service charge of 50 cents a month plus a charge for all gas consumed at \$1.40 per thousand cubic feet. Other reductions are made for gas consumed in excess of ten thousand cubic feet per month, but, as the number of large consumers is small, and there have been special rates heretofore for the large consumers, it is not necessary to consider the further reduction in the rate.

The net result of the new rate to the customers would be shown in the following table:

<i>Consumption.</i>	<i>Present.</i>	<i>Charges New.</i>
1,000 cu. ft.....	\$1 50	\$1 90
2,000 cu. ft.....	3 00	3 30
3,000 cu. ft.....	4 50	4 70
4,000 cu. ft.....	6 00	6 10
5,000 cu. ft.....	7 50	7 50
6,000 cu. ft.....	9 00	8 90
8,000 cu. ft.....	12 00	11 70
10,000 cu. ft.....	15 00	14 50

From the table it will be seen that the consumption of less than 5,000 cubic feet per month will result in a higher charge than under the old rates. The consumption in excess of 5,000 cubic feet per month will result in a lower net charge to the customer.

In its application the company submitted detailed statements of earnings and expenses, and, at the hearing in this matter on July 6th, testimony was submitted to the effect that the New Jersey Northern Gas Company at the present time is manufacturing gas under such conditions that the net cost is 30 cents higher per thousand cubic feet than was the case during similar months of 1916. In addition, it was testified that certain additional costs were not entirely reflected in the statement filed, and that continued operation as at present would result in a still greater increase in cost over that which prevailed during 1916. The net cost of gas manufactured during the year 1916 was 84.9 cents per thousand cubic feet of gas sold. During the first five months of 1917 the cost per thousand cubic feet of gas sold was \$1.149. These figures, of course, do not take into account interest on bonds or dividends on stock.

P. R. R. Co. et al.—Permission to Construct Grade.

CONCLUSIONS.

From the testimony submitted it seems evident that, if the high cost of manufacture of gas continues, additional revenue will be needed. The testimony, however, fails to indicate how much additional revenue would probably result from the proposed tariff. We are, therefore, unable to conclude that the tariff will be fair and reasonable to all classes of consumers. Nor was there satisfactory proof that the proposed service charge bears a proper relation to the cost of readiness to serve. For these reasons we are constrained to withhold approval of the proposed schedule.

Dated August 14th, 1917.

No. 459.

IN THE MATTER OF THE APPLICATION OF PENNSYLVANIA RAILROAD COMPANY, LESSEE, OF THE WORKS AND PROPERTY OF THE UNITED NEW JERSEY RAILROAD AND CANAL COMPANY, AND THE WHEATENA COMPANY, FOR PERMISSION TO CONSTRUCT AND LAY AT GRADE A SPUR TRACK OR SIDING CROSSING GRAND STREET, IN THE CITY OF RAHWAY, COUNTY OF UNION AND STATE OF NEW JERSEY.

Permission for the construction of an industrial siding across a public highway at grade is given, there being no feasible way by which necessary siding facilities can be obtained except by a crossing at grade, and it appearing that no great danger will exist because of the same.

J. F. Chandler, for Pennsylvania Railroad Company.

David Armstrong (of Heyer & Armstrong), for the Wheatena Company.

G. H. Cooper and *J. B. Furber*, for objectors.

James Maybury, Jr., for the Board.

P. R. R. Co. et al.—Permission to Construct Grade.

Application is made for permission, under the statute, to construct a siding across Grand Street, Rahway, thus creating a new railroad crossing at grade.

The Wheatena Company now occupies land on the northerly side of Grand Street, west of the Pennsylvania Railroad Company tracks, and is served by a switch or industrial siding, which extends from Scott Avenue southwardly, serving several industries. The siding ends north of Grand Street, opposite The Wheatena Company plant, at which point two tracks are laid, the second track connecting with the main spur just north of the Wheatena plant. The proposal is to extend one of these spur tracks across Grand Street, at the grade thereof, to serve new buildings to be erected by The Wheatena Company, south of Grand Street. There seems to be no feasible and practicable method of affording the necessary siding facilities except as proposed. Elevation would be very costly and would not furnish sidings for the buildings contemplated.

Objection is made to the creation of a new grade crossing on the ground of danger to travelers, and it is urged that, in view of the elevation of the main line through Rahway at great expense, grade crossings of any kind should not be permitted. The neighborhood affected is an industrial community and is being more thickly settled with industries and will probably always be a manufacturing center. The Mayor and Common Council, recognizing the need of sidings in a manufacturing section, passed an ordinance, over protest of objectors, giving permission to establish the crossing in question. Many citizens of Rahway attended the hearing and testified or were prepared to testify, if called, that the siding in question was necessary to the development of the industry particularly affected, as well as to the growth of the neighborhood.

The objectors assert that the operation of trains over the spur will be a menace to the safety of children and other users of the highway. It is an undoubted fact that it would be more desirable if the siding could be constructed above the grade of the street, but it is not practicable to do so. Movements over the crossing will be few, and will be at slow speed. All such movements will be protected by a member of the crew or other flagman. It appears,

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therefore, that no great danger should be presented at this crossing. It is not like a crossing at grade traversed by trains at frequent intervals and at high speed.

We will, therefore, grant permission for the construction of the crossing at grade over Grand Street, to serve the new buildings of The Wheaten Company, when constructed, upon condition that derail and Ellis Bumper Block be installed as shown on Plan 408-A submitted by the railroad company; that derail be kept locked and operated only by employees of the railroad company; that all movements over the highway be preceded by a flagman, and that the speed of such movements does not exceed six miles per hour.

Dated August 28th, 1917.

No. 460.

IN THE MATTER OF THE COMPLAINT OF CITY OF ASBURY PARK
VS. NEW YORK AND LONG BRANCH RAILROAD COMPANY IN
RE EXTENSION OF COOKMAN AVENUE OVER TRACKS OF NEW
YORK AND LONG BRANCH RAILROAD.

1. It is the policy of the State to decrease the number of grade crossings so far as is reasonably practicable and not to add thereto unless required by public necessity.

2. Where there are other crossings in proximity to the crossing applied for, it must appear that the existing crossings are inadequate before a new crossing will be granted.

Durand, Ivins & Carton, for Asbury Park.

John S. Applegate & Son, for the respondent.

The City of Asbury Park, by ordinance adopted in the year 1909, provided that Cookman Avenue should be laid out and extended across the right of way of the New York and Long Branch Railroad.

Asbury Park v. New York and Long Branch R. R. Co.

The action of the city was challenged by the railroad company and objection was made to the Board of Railroad Commissioners, protesting against the creation of an additional grade crossing at said point, and after hearing the said Board, on July 29th, 1909, filed its report refusing its permission for the extension of said Cookman Avenue at grade as proposed.

The city alleges in its new petition that the local conditions existing at the point of this proposed crossing have changed materially since the date last mentioned; that since that time Asbury Park west of the railroad company's tracks has been building up; that in addition to being a residential section it has now become an important part of the business center of said city; that the population west of the tracks about equals the population east of the same and that said crossing of Cookman Avenue over said tracks at grade is necessary and advisable for the best interests of the city, and should be established.

Cookman Avenue extends west of the railroad about 868 feet to Prospect Avenue, which latter avenue runs practically north and south connecting with Bangs Avenue on the north and Springwood Avenue on the south. About 150 feet west of the railroad tracks, Cookman Avenue intersects Lincoln Place, which also intersects north and south with Bangs and Springwood Avenues. About 450 feet west of the railroad tracks, Cookman Avenue intersects Langford Street, which likewise connects with Bangs and Springwood Avenues, so that west of the railroad there are three streets running practically north and south and connecting with Bangs Avenue on the north and Springwood Avenue on the south. East of the railroad, Bangs Avenue and Springwood Avenue are also connected, first by Main Street east of the station grounds of the respondent, and again by the driveways of the railroad company and Railroad Avenue. These avenues and connections give ample opportunity to the public, east and west, unimpeded and conveniently to travel to either side of the railroad company's tracks.

The street itself, west of the railroad, has changed very little. According to the original testimony, there were thirty-one buildings at the time of the first hearing, and from the Exhibit R there seem to be only three more now, and it should not be for-

Asbury Park v. New York and Long Branch R. R. Co.

gotten that any buildings erected on Cookman Avenue, west of the track since June, 1909, were built with the knowledge that a railroad crossing at grade had been refused. .

The proposed crossing would have been an extra hazardous one at that time and would be now. There is no greater necessity for the extension of said avenue now than when the application of the city was refused. The view of the traveler approaching the crossing from east or west, looking north, is obstructed by frame structures, so that a clear view of the tracks cannot be obtained until within a very short distance of the rails.

The spacious grounds in front of the railroad station, the existence of Railroad Avenue running from Cookman Avenue to Springwood Avenue, and Bangs Avenue about 550 feet immediately north of Cookman Avenue, afford adequate and convenient outlet for the traveling public desiring to cross the tracks in the vicinity of Cookman Avenue.

The extension of Cookman Avenue might add a little to the convenience of the persons living on "West Cookman Avenue," but would not save them more than three or four minutes in time in reaching Main Street or the railroad depot. Springwood Avenue on the south, and Bangs Avenue on the north, lie but a block away. The property owners or dwellers on "West Cookman Avenue" would be a little more inconvenienced by the desired grade crossing, but that is of little value compared with the dangers incident to the establishment of such a crossing in that point. It was mentioned that a Jewish Synagogue and two clubhouses were erected in this immediate neighborhood, but with few exceptions the clubhouse members and the attendants at the synagogue reside on the west side.

The business places in that location are patronized almost exclusively by the people of the west side.

All agree the crossing would be hazardous and that it would be necessary to have the same protected by flagman and gates, if established, yet many feel that as it is used by a number of pedestrians and because, in their opinion, it would be no more dangerous than the existing crossings at said Bangs and Springwood Avenues, the city's request should be granted.

This Board decided in the case of *Paterson v. Erie Railroad*,

Asbury Park v. New York and Long Branch R. R. Co.

Reports of Public Utility Commissioners, volume 2, page 62: "Crossing of a railroad track by a number of people at a place other than a lawfully used highway, cannot be accepted as a reason for increasing the number of crossings, unless it plainly appears that the lawfully established highway crossings are not reasonably adequate or that the new crossing will be free from danger incident to the established crossings." This is the complete answer to those persons who have been crossing Cookman Avenue at the *locus in quo* at their peril.

It is the policy of the State to decrease the number of grade crossings so far as is reasonably practicable and not to add thereto unless required by public necessity. This policy is recognized in many of our statutes and particularly is emphasized in the act looking toward elimination of grade crossings known as the Fielder Act.

Our Supreme Court, in the suit of *New York, Susquehanna and Western Railroad Company v. Paterson*, in an opinion filed at the present June Term, says: "Manifestly a public crossing at grade might be highly desirable as a public convenience, but if its existence and continued use might serve in actual practice as a standing menace to the lives of the community, it would not comport with a proper exercise of wisdom, nor accord with the declared legislative policy and intent to authorize or compel such construction."

Public necessity is the rule of this Commission to be applied in determining whether or not a grade crossing shall be permitted—necessity for the development of a municipality. Where there are other crossings in proximity to the crossing applied for, it must appear that the existing crossings are inadequate before a new crossing will be granted.

Having in mind all the attending conditions, including the extra hazardous character of the proposed crossing, together with the well-defined policy of the State to abolish such crossings instead of increasing them, we do not feel warranted in permitting the establishment of a grade crossing at Cookman Avenue and the application therefore will be dismissed.

Dated September 10th, 1917.

In re Rates—Transportation of Passengers Between Points in New Jersey.

No. 461.**IN THE MATTER OF INCREASED RATES FOR TRANSPORTATION OF
PASSENGERS BETWEEN POINTS IN THE STATE OF NEW
JERSEY.**

This proceeding involves proposed increases in passenger rates by the Pennsylvania Railroad Company, the West Jersey and Seashore Railroad Company, the Philadelphia and Reading Railway Company and the Atlantic City Railroad Company. The chief increases proposed are cancellations of excursion rates at less than double the one-way rate, and increases in commutation rates. The following report is divided into four parts in which detailed consideration is given to each of the four carriers in interest.

Testimony was given and statements submitted as to revenues, divided between passenger and freight, and the revenue from passenger service was divided between strictly passenger revenue and that derived from other operations on passenger trains.

Passenger revenue was divided between revenue from intrastate travel and revenue from the New Jersey portion of interstate travel.

Operating expenses were divided between freight service and passenger service.

The West Jersey and Seashore Railroad Company and the Pennsylvania Railroad Company took the months of February and August as representative of travel during the year. Intrastate passenger revenue, the number of intrastate passengers, and the number of intrastate passenger miles were arrived at by assuming the percentages shown for the two months would hold throughout the year. This is accepted as a proper method on which to base conclusions. The Atlantic City and Philadelphia and Reading Railway Companies offered no testimony as to the value of that part of their properties devoted to intrastate passenger traffic. Having shown a deficit from this traffic and from all traffic after paying interest it was not regarded as necessary to discuss valuation. The Pennsylvania Railroad Company was willing to accept the valuation assessed for taxation as the true value of its property in the State.

On original hearing the West Jersey and Seashore Railroad Company claimed a valuation in excess of its assessment for taxation. This led to an increased assessment of \$3,000,000 which added approximately \$80,000 per year to taxes paid by the company. *Held—*

1. The company must be allowed to earn the additional taxes from an increase of rates.

2. The carriers are entitled to some increases, but not in the form proposed.

3. The Atlantic City Railroad Company, West Jersey and Seashore Railroad Company and Philadelphia and Reading Railway Company may increase commutation rates as proposed, and excursion fares to 175 per cent of one-way fares. The Pennsylvania Railroad Company may increase its commutation rates on its Trenton Division.

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H. W. Bikle, for Pennsylvania Railroad Company and West Jersey and Seashore Railroad Company.

W. L. Kinter, for Philadelphia and Reading Railway Company and Atlantic City Railroad Company.

E. G. C. Bleakly and *W. C. Marshall*, for South Jersey Commuters' Association and others, objectors.

This proceeding is a rehearing of the case entitled "In the matter of Increased Rates for Transportation of Passengers Between Points in the State of New Jersey," decided by the Board's report dated March 12th, 1915. The chief increases involved are the cancellation of excursion rates at less than double the one-way rate, except to seashore points and intermediate points, where double the one-way fare would be higher than from Camden to the seashore points. Sixty-trip tickets were advanced twenty-five cents and forty-six-trip tickets twenty cents. Some other changes are proposed, but the above constitute the principal increases. In the evidence submitted at the first hearing the Board was unable to find sufficient proof for determining the justice of the specific rates in question. It was the original theory of the carriers to show that they needed more revenue and to rely on the report of the Interstate Commerce Commission in the Five Per Cent. Case. In the original report the Board said: "We cannot, therefore, approve specific increases of rates for travel wholly within the State upon being satisfied merely that the carrier is transacting all or some part of its business, both intrastate and interstate, at less than a just and reasonable return or, indeed, even at a loss." The advances were then denied and a rehearing ordered at which the companies were afforded an opportunity to submit further proofs as to the revenues and cost of intrastate New Jersey travel. The rehearing was held on October 18th, 19th, 20th, 21st and 26th, 1915, January 19th, February 17th, March 27th, and March 30th, 1916. Evidence purporting to show cost of intrastate passenger traffic was introduced by witness Bean for the Atlantic City Railroad and the Delaware and Bound Brook branch of the Philadelphia and Reading Railroad, and by witness Fell for the West

In re Rates—Transportation of Passengers Between Points in New Jersey.

Jersey and Seashore and the New Jersey division of the Pennsylvania Railroad. The latter witness, among others, gave also testimony tending to show that the actual value of the West Jersey and Seashore was greater than the assessed value. The three other roads offered nothing to show values greater than assessed valuation.

The record made consists of many detailed exhibits and is voluminous. It has required considerable time to make the careful and thorough analysis of all of the testimony and documentary evidence produced which the importance of the case warrants.

Detailed consideration of each of the four roads interested in this proceeding has been included in the four sections of this report, into which for greater convenience it has been divided, and to which reference should be made for data and conclusions given below. Only the conclusions and parts of the testimony have been included here.

The Atlantic City Railroad and the Delaware and Bound Brook branch of the Philadelphia and Reading Railway produced through W. K. Bean statements identical in form and made up on identical bases and theories. Figures for these two roads have been discussed together. Revenues within the State of New Jersey were divided in the accounting between freight service and passenger service according to the usual classification of revenue accounts. Passenger service revenue was further divided between strictly passenger revenue and the revenue derived from other operations on passenger trains. The former revenue consists of earnings from passengers, excess baggage, station and train privileges, parcel room receipts, storage of baggage and parts of certain incidental revenues. Revenue from other operations on passenger trains consists of mail, express, milk and the remainder of incidental passenger train revenues not included in strictly passenger revenue. Most of division has been done in the accounting and is highly accurate.

Strictly passenger revenue was divided between revenue from intrastate travel and revenue from the New Jersey portion of interstate travel during the year ended June 30th, 1914, by an actual inspection of tickets for the entire period. Excess baggage

In re Rates—Transportation of Passengers Between Points in New Jersey.

revenue was similarly treated. (Record 266-267.) Incidental revenues were divided on the basis of passenger revenues. The incidental revenues so divided are a small part of the total. The revenue divisions are as accurate as they can be made and they cover a complete year.

Operating expenses were divided between freight service and passenger service. All amounts which could be directly assigned to one service or the other were so assigned and such amounts as could not be directly assigned were called "Common." The common part was divided between services on the train mile basis considering only passenger trains and freight trains. (See Section I for an extended discussion of the Atlantic City Railroad and Section IV for the Delaware and Bound Brook branch.) Passenger train expenses were divided between strictly passenger expenses (including baggage) and the expenses of other operations on passenger trains. The "equated car mile" basis was used for this separation. The car mile data was analyzed for a period and the units from this period applied to car miles of combination cars to derive the percentage which equivalent car miles in strictly passenger service bore to total passenger train car miles. This basis has been called the car-foot-mile basis in the work of the post office department in determining the cost of mail service. (Report of Committee on Railway Mail Pay, 1912.) It appears to be the best basis at present available for such a division.

Further division of the strictly passenger expenses between interstate and intrastate traffic was effected by the witness on the basis of the revenues in intrastate and interstate traffic. A combination of the number of passengers and the number of passenger miles would have been better for this separation. In fact, the division on the basis of revenue is no division at all. It simply restates the whole strictly passenger costs and revenues on a scale 11.11 per cent. as great. The witness, Mr. Bean, correctly testified (Record 274) that this division understated the intrastate portion of strictly passenger operating expenses. Other costs, such as taxes, hire of equipment, etc., were divided between the various services in the same way that operating expenses were divided.

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Assessed valuation was not treated in detail by witness Bean except incidentally in the division of taxes. It was shown that all passenger service was conducted at a loss and that intrastate passenger travel was less profitable than interstate travel, hence, no computation of the rate of return on the property was necessary.

Mr. F. J. Fell testified as to costs for the West Jersey and Seashore and for the Pennsylvania Railroad. Operating revenues were divided between freight service and passenger service as far as possible in the accounting and the remaining incidental revenues were apportioned upon suitable bases. Passenger train revenue was further divided between strictly passenger revenue and revenue from other operations on passenger trains using the method adopted by the Atlantic City Railroad. These divisions were so largely made in the accounting that there can be no material question of their accuracy. The further division of passenger revenue between interstate and intrastate travel cannot be given such unqualified approval. For the purpose of saving labor, the carrier chose the two months of February and August, 1914, as representative of the travel during the year and analyzed the revenues, number of passengers, and passenger miles. Intrastate passenger revenue for the year was assumed to be the same part of the total that the intrastate revenue for two months was of the total. The number of intrastate passengers and the number of intrastate passenger miles for the year were arrived at by applying the percentages for two months to the totals for the year. This method was severely criticised by counsel for the objectors, and by their expert, Mr. Bellis, as not affording a proper basis for reaching necessary conclusions as to travel, etc., and it was insisted that these figures must be wholly disregarded. We cannot reach this conclusion.

Actual quantities of intrastate revenue, number of passengers and number of passenger miles might for the year be different from the figures determined by application of the percentages of the two months' study to the totals for the year, but if the results of the study were consistently applied, the *nature* of the showing would be correct nevertheless. The intrastate portion of total strictly passenger revenue was determined by the application of

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percentages derived in the two months' study to the total for the year. The intrastate portion of strictly passenger operating expenses was determined by application of the percentages from the two months' study of the number of passengers and passenger miles to the various primary accounts in operating expenses. (See below.) Hence, the showing is a proper one upon which to base conclusions.

Operating expenses were divided between freight service and passenger service by applying the train mile basis to common items after all expenditures had been definitely assigned in the accounting to freight service, passenger service or "Common" to both services. (See Section II for a discussion of the West Jersey and Seashore by primary accounts.) Details necessary for a similar discussion of the Pennsylvania Railroad were not available, but such analysis as could be made appears in Section III. Passenger operating expenses were divided between strictly passenger expenses and the expenses of other operations on passenger trains on the car mile basis in the same manner as the Atlantic City Railroad's expenses were divided. Certain minor accounts were allocated directly before the car mile basis was applied. The further division between intrastate and interstate has been discussed above.

It was impossible to make studies as complete for the combined statements of the four roads as for the individual carriers owing to lack of complete information. Divisions between freight service and passenger service were lacking for the Pennsylvania and the Philadelphia and Reading. The Atlantic City has shown freight to be more profitable than passenger, while the reverse was true on the West Jersey and Seashore. Passenger density and revenue per passenger mile were greater on the West Jersey and Seashore. The higher freight revenue per ton mile of the Atlantic City Railroad was offset by smaller density of traffic. The results of freight-passenger divisions were about what might be expected. The following table contains comparisons of certain significant figures for all traffic on the two roads just considered:

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ITEM.	Year Ended June 30th, 1914.	
	West Jersey	Atlantic City
	and Seashore R. R.	R. R.
Ton miles per mile of road.....	277,169	200,156
Average haul, miles.....	33.40	23.83
Revenue per ton mile.....	\$0.01830	\$0.02230
Ton miles per loaded car mile.....	16.09	13.27
Freight revenue per train mile.....	\$3.31142	\$2.99572
Passenger miles per mile of road.....	836,092	744,369
Average haul, miles.....	27.40	34.08
Revenue per passenger mile.....	\$0.01411	\$0.01167
Passenger miles per train mile.....	94	99
Passenger miles per car mile.....	25	23
Passenger service train revenue per train mile.	\$1.43382	\$1.22914

*Separation of Passenger Train Revenue and Expenses Between
Strictly Passenger Traffic and Other Traffic on Passenger
Trains Combined for the Four Roads.*

This separation was as incomplete as the division between freight service and passenger service. Figures for both the Atlantic City and the West Jersey and Seashore tended to show a higher operating ratio for mail, express, etc., than for strictly passenger business. For the Atlantic City Railroad 94.09 per cent. of the revenue and 91.41 per cent. of the expenses and other costs pertained to strictly passenger traffic. For the West Jersey and Seashore Railroad 92.77 per cent. of the revenue and 91.13 per cent. of operating expenses and other costs pertained to strictly passenger traffic.

On account of the methods used in compiling the car mile basis, these results cannot be assumed to be absolutely correct. They are as nearly correct as they could be made without great expense, and they show results closely enough for the purposes of this report. Certainly mail and express are not more profitable than strictly passenger service. The record in this case shows that mail and express are less profitable than passenger service, but the amount of the difference is perhaps not accurately shown.

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Separation of Intrastate and Interstate Passenger Traffic Combined for Four Roads.

Complete figures for the four roads principally interested in this case were available. Details of each road are shown in the sections. Revenues, operating expenses and total costs for the four roads have been assembled in the following tables, which need no explanation. All figures for the Atlantic City Railroad and the Philadelphia and Reading are for the fiscal year; all West Jersey and Seashore and Pennsylvania Railroad for the calendar year unless otherwise stated.

REVENUES—YEAR 1914.

ROAD.	Total Strictly Passenger Revenue.	Intrastate.		Interstate.	
		Amount.	%	Amount.	%
A. C. R. R.....	\$1,489,912 15	\$166,037 77	11.14	\$1,323,874 38	88.86
W. J. & S. S. R. R.	4,220,597 43	919,732 13	21.79	3,300,865 30	78.21
Penn. R. R.....	10,125,891 48	1,953,038 62	19.29	8,172,852 86	80.71
P. & R. R. R....	*584,825 00	57,897 68	9.90	526,927 32	90.10
Total	\$16,421,226 06	\$3,096,706 20	18.86	\$13,324,519 86	81.14

OPERATING EXPENSES—YEAR 1914.

ROAD.	Strictly Passenger.	Intrastate.		Interstate.	
		Amount.	%	Amount.	%
A. C. R. R.....	\$1,220,872 59	\$135,638 94	11.11	\$1,085,233 65	88.89
W. J. & S. S. R. R.	3,199,655 50	724,288 13	22.64	2,475,367 37	77.36
Penn. R. R.....	7,387,973 33	1,763,618 65	23.87	5,624,354 68	76.13
P. & R. R. R....	†604,648 37	59,860 19	9.90	544,788 18	90.10
Total	\$12,413,149 79	\$2,683,405 91	21.62	\$9,729,743 88	78.38

TOTAL COSTS—YEAR 1914.

ROAD.	Strictly Passenger.	Intrastate.		Interstate.	
		Amount.	%	Amount.	%
A. C. R. R.....	\$1,419,555 69	\$157,712 04	11.11	\$1,261,843 05	88.89
W. J. & S. S. R. R.	3,469,979 69	775,653 65	22.35	2,694,326 04	77.65
Penn. R. R.....	8,438,800 87	1,984,898 48	23.52	6,453,902 39	76.48
P. & R. R. R....	†650,351 17	64,384 77	9.90	585,966 40	90.10
Total	\$13,978,687 42	\$2,982,649 54	21.34	\$10,996,037 88	78.66

*Estimated.

†Revised figure. See Section IV.

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Operating Ratio is the percentage of gross earnings from operation required for operating expenses. Taxes, hire of equipment, joint facility rents and similar expenditures for operation are not embraced in the term *operating expenses*, but together with operating expenses, are included in the term *total costs* as used in this report. Operating ratios, and the ratios of total costs to revenues have been computed for each carrier and for the combination of the four carriers.

OPERATING RATIO IN PER CENT.—YEAR 1914.

ROAD.	Strictly Passenger.	Intrastate.	Interstate.
A. C. R. R.....	81.94	81.94	81.94
W. J. & S. S. R. R.....	75.81	77.89	75.23
Penn. R. R.....	72.96	90.30	68.82
Phila. & Read. R. R.....	103.39	103.39	103.39
Total	75.59	86.65	73.02

RATIO OF TOTAL COSTS TO REVENUE (PER CENT.)—YEAR 1914.

ROAD.	Strictly Passenger.	Intrastate.	Interstate.
A. C. R. R.....	95.28	95.28	95.28
W. J. & S. S. R. R.....	82.22	84.33	81.62
Penn. R. R.....	83.34	101.63	78.97
Phila. & Read. R. R.....	111.20	111.20	111.20
Total	85.13	96.32	82.52

The Atlantic City Railroad used a revenue basis for division between intrastate and interstate, hence all figures for passenger service are the same.

Since about 60 per cent. of the total costs are those of the Pennsylvania Railroad, the totals for four roads are to this extent an expression of the condition of that carrier and not a measure of the intrastate and interstate passenger traffic in New Jersey.

Intrastate New Jersey passenger traffic is such a small part of the total for the Pennsylvania Railroad and for the Philadelphia and Reading that figures for these roads do not assist in determining the matters pending in this case. Any statements showing revenues and expenses of a particular traffic of small volume must be based upon some data not strictly applicable to the traffic in

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question. Such figures, no matter how carefully prepared, must very strongly reflect the operations from other traffic. If the case depended on the showing of these two large systems, reasons for asserting that proof had not been made would be plentiful. Many of these reasons have been given in detail elsewhere.

The case of the Atlantic City Railroad and the West Jersey and Seashore Railroad is, however, different. Passenger traffic is by far the greatest source of their revenues. The Atlantic City derives about 63 per cent. of its total revenue from passengers alone and the West Jersey and Seashore derives about 65 per cent. of its total revenue from passengers alone. Both carriers have all their rails within the State of New Jersey. No separation of expenses between States is involved. The separation of revenues between freight service and passenger train service, and the further separation of passenger train revenues between strictly passenger traffic and other passenger train services have been made in the accounting and are accurate. No question can be raised concerning the revenue separations just mentioned. The Atlantic City Railroad further separated strictly passenger revenue between intrastate and interstate traffic for the entire year by examination of all tickets used. The West Jersey and Seashore selected two months for their study of passengers, passenger miles and revenue and the separation of these three items between intrastate and interstate traffic. The period selected cannot be said to be wholly representative, but neither could any other period. Figures for a whole year would not be entirely representative of the general traffic. The West Jersey and Seashore used the two months' study for dividing the figures for a year. Any other period chosen might have affected the quantity of intrastate business but the *relative* profitability of intrastate and interstate traffic would not be changed by the selection of a different period. The method used was wholly consistent and conclusions based upon the results derived would not be changed by using another period. As above stated the criticisms of witness Bellis on this subject are without merit.

Operating expenses were divided into the same subdivisions as revenues. These separations are discussed in the sections.

The figures in the above tables pertaining to the Atlantic City

In re Rates—Transportation of Passengers Between Points in New Jersey.

Railroad and the West Jersey and Seashore Railroad are much more significant than figures for the other roads. Combined totals for these two roads would more nearly measure intrastate passenger traffic than totals given above. This combination has been made in the following table:

ATLANTIC CITY R. R. AND WEST JERSEY AND SEASHORE R. R. COMBINED
—YEAR 1914.

	<i>Strictly Passenger.</i>	<i>Intrastate.</i>	<i>Interstate.</i>
Operating revenues	\$5,710,509 58	\$1,085,769 90	\$4,624,739 68
Operating expenses	4,420,528 09	859,927 07	3,560,601 02
Operating ratio	77.41%	79.20%	76.99%
Total costs	4,889,535 38	933,366 29	3,956,169 09
Ratio of total costs to revenues.	85.62%	85.96%	85.54%

Here the operating ratio is slightly greater for intrastate traffic than for interstate traffic. The leveling effect of the revenue basis used by the Atlantic City Railroad is apparent. The outstanding fact in this table is not the higher operating ratio and higher ratio of total costs to revenue for intrastate traffic. But it is the fact that both operating ratios are extremely high. When taxes, hire of equipment and joint facility rents have been included, the ratio of total costs to revenues is over 85 per cent. When interest deductions have been considered there is an insufficient amount available for additions and betterments and nothing for dividends.

Considered together, the Atlantic City Railroad and the West Jersey and Seashore Railroad have fully shown need for additional revenue from intrastate passenger travel. The Atlantic City alone operates at an increasingly great loss. The West Jersey and Seashore alone shows an uncertain financial condition. Revenues are not at present needed by the latter road to the same degree as by the former, but a decreasing net revenue has been shown and the necessity for early advances proven.

Valuation and Rate of Return.

The Atlantic City Railroad and the Philadelphia and Reading Railway offered no testimony as to the value of that part of their properties devoted to intrastate passenger travel. Having shown a deficit from this traffic and from all traffic after interest had

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been paid, it was unnecessary to discuss valuation. The Pennsylvania Railroad was willing to accept the assessed valuation as the true value of their property. The West Jersey and Seashore submitted a mass of testimony tending to show a greater valuation than the assessed valuation. It was impossible to form an idea of the value of this testimony without an elaborate field force and this was not available. Suffice it to say that the assessed valuation for 1915 was greater than for 1914 by about \$3,100,000 (Record 324) and that earnings on the increased value are desired by the carrier.

The increase mentioned came about as follows: In the course of the proceeding the West Jersey and Seashore Railroad Company put in evidence as to the value of its property. The value claimed was considerably in excess of the valuation upon which taxes were assessed. The attention of the State Board of Taxation was immediately called to the matter by counsel for the commuters, with the result that, after due investigation, the assessment of this railroad was increased. In 1914 the total assessment of the tangible property of this company was \$14,840,874. In response to the demand of counsel for the commuters, this assessment was increased more than \$3,000,000. The direct effect upon the company's revenues is to require it to expend approximately \$80,000 per year more for taxes. This additional sum must come from the rates paid by those who use the road for travel and shipment of freight. It must have been in the minds of counsel that if taxes were so substantially increased, additional revenues from passengers must be forthcoming, unless the company was shown to be already enjoying too great an income. This is shown not to be the case. It therefore follows that the company must be allowed to earn the additional taxes from an increase of rates.

The Pennsylvania Railroad filed an elaborate study of its assessed valuation (Exhibit P.R.R.-10-R.H.) divided between freight service and passenger service. The passenger part of the valuation was further divided in the same way and upon the same basis as operating expenses. The strictly passenger valuation of the New Jersey division was stated as \$22,128,779. The net earnings (See Section III) were \$1,687,090, which would pay return on that valuation at the rate of 7.62 per cent. The intra-state passenger travel was shown to be carried at a loss of \$31,859,

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which is at the rate of 0.68 per cent. on the intrastate valuation of \$4,695,418.

In the same exhibit the intrastate passenger part of the total West Jersey and Seashore assessed valuation was stated as \$2,250,914. Net earnings from Section II were \$144,078.48, and the rate of return was 6.40 per cent. on the value. Additions and betterments are to be deducted from this figure.

Decreasing rate of return on the valuation from year to year, and the actual earning on the value are shown in Section II.

Sources of Increased Revenue.

Carriers have suggested two main sources of advanced revenue which they contend should bear the increases. These are commutation tickets and excursion tickets (round trip tickets at less than double the one-way fare). The low earnings of the Trenton division show that commutation traffic is not profitable. It is true that commutation travel is regular and that during the morning and evening rush-hours it more nearly exhausts the carrying capacity of the equipment than other passenger travel. But many trains are run for commutation business outside of rush hours, on which the travel is very light. Commutation fares have been shown to yield very low revenues per passenger mile, and the rates should be advanced.

Abolition of excursion tickets has not been so fully justified. It is not necessary to enumerate the advantages of these tickets to both patrons and carriers. In many cases the excursion fare is about 140 per cent. of the one-way fare. It may be assumed that the return journey has some benefit to the carrier, but it cannot be assumed that the return trip may be made for 40 per cent. of the price of the going trip. Excursion fares have had long standing in the transportation business in New Jersey and should not be abolished at once, if at all. Then, too, it is not proposed to abolish excursion rates at less than double one-way fares to seashore points. Excursion fares might be advanced to 175 per cent. of the one-way fare, allowing considerable additional revenue to the carrier and retaining the transportation and other advantages of this form of ticket. Developments would show whether 175 per cent. of the one-way fare was too much or too little for the round trip. It seems obvious that 140 per cent. is not enough.

In re Rates—Transportation of Passengers Between Points in New Jersey.

SECTION I.

ATLANTIC CITY RAILROAD.

Freight-Passenger Separation.

The record contains a statement submitted in the interest of the Atlantic City Railroad, marked "A.C.R.H. 4" which purports to be an income account for the intrastate passenger business in New Jersey for the year ended June 30th, 1914, supported by the figures necessarily used in arriving at this presentation. This exhibit has been reproduced at the end of Section I of this report. Operating expenses, revenues, hire of equipment, taxes and joint facility rents were divided first, between freight service and passenger service; second, the passenger service was divided between strictly passenger business (including baggage) and other business such as express, mail, milk, etc., done on passenger trains; third, the strictly passenger business was divided between intrastate New Jersey traffic and interstate New Jersey traffic. The methods of division in the three separations have been analyzed below and discussed in the order given. We turn first to the separation of operating expenses and other disbursements between freight service and passenger service. All figures refer to the year ended June 30th, 1914, unless otherwise specifically noted.

Maintenance of Way and Structures.

Total maintenance of way and structures expenses for the year were \$448,959.01. In the accounting \$9,345.17 was directly charged to freight in "Docks and Wharves." In "Building, Fixtures and Grounds" \$7,160.19 was charged to freight and \$7,970.85 to passenger. All other expenses were called common to freight and passenger and were divided as a single item on the basis of revenue train miles as follows: All the freight train miles (240,857) plus three-fourths of the mixed train miles ($\frac{3}{4}$ of 12,769 = 9,577) divided by the total train miles (1,521,686) gave 16.46% freight. Similarly all the passenger train miles (1,268,060) plus one-fourth of the mixed train miles ($\frac{1}{4}$ of

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12,769 = 3,192) divided by the total gave 83.54% passenger. While no such statement was made upon the record, this basis assumes that the excess speed of a passenger train is equal to the excess weight of a freight train in destruction to the roadbed. This assumption is commonly made and has some merit. It fails in one very important respect, and, without discussing the train mile basis in general, it will be sufficient to point out that it neglects consideration of switching. There were 265,317 locomotive miles made in switching service. Whatever wear these locomotive miles may have caused to the roadbed and tracks was charged 83.54% to passenger. This was improper.

The report to the Board for 1915 shows that of 239,411 yard switching locomotive miles, 170,206 or 71.10% were made in freight service and 69,205 or 28.90% were made in passenger service. This report also showed that for 1915 the freight train miles were 14.76% of the total freight and passenger train miles, while in 1914 the freight train miles were 15.96% of the total freight and passenger train miles. Since the ratio of freight to passenger remained about constant for the two years in question, we may assume for the purposes of this discussion that the switching locomotive miles in the two services were approximately in the same ratio for the two years. The further assumption that a switching locomotive mile is as destructive to track as a road train mile can be justified in part by the frequent stopping and starting, and frequent braking of a switching locomotive. On these assumptions the revenue train mile basis has been modified, for 1914, as follows:

	Total.	Freight.	Per cent. of Total.	Passenger.	Per cent. of Total.
Freight train miles.....	240,857	240,857	100		
Passenger train miles.....	1,268,060			1,268,060	100
Mixed train miles.....	12,769	9,577	75	3,192	25
Switching locomotive miles..	*265,317	188,640	71.10	76,677	28.90
Total	1,787,003	439,074	24.57	1,347,929	75.43

*Exhibit shows on page D-1 75.71 per cent. freight, 24.29 per cent. passenger switching locomotive miles for calendar year 1914. It seems better to use fiscal year for fiscal year.

In re Rates—Transportation of Passengers Between Points in New Jersey.

When the direct passenger expenses of \$7,970.85 are added to 75.43% of \$424,482.80 (= \$320,187.38) we have \$328,158.23 instead of the figure of \$362,583.78 derived from the Atlantic City Railroad exhibit. The discrepancy between these items, an amount of \$34,425.55 has been given further consideration below. The freight amount should be \$120,800.78 to correspond with the passenger train figure of \$328,158.23.

Maintenance of Equipment.

Maintenance of equipment expenses were largely separated in the accounting. Of a total of \$172,974.94 the directly assigned freight amount was \$35,982.72, the directly assigned passenger amount was \$129,971.53, leaving \$7,020.69 as common expenses. The common expense item is composed of superintendence, maintenance of work equipment and shop machinery and a few minor accounts. This small amount might better have been divided between freight service and passenger service on the percentage of the directly charged amounts rather than on the revenue train mile basis used by the Atlantic City Railroad. The revenue train mile basis (83.54% passenger) has no direct relation to the maintenance of equipment expenses and fails to consider switching operations as largely freight. If the final separation of maintenance of equipment charges had been made by adding to the directly separated amounts the percentage of the common amount derived from the directly charged amounts, the results would have been as follows:

Directly charged to freight.....	\$35,982 72=21.68%
Directly charged to passenger.....	129,971 53=78.32%
	<hr/>
	\$165,954 25
Freight maintenance of equipment expenses:	
\$35,982.72 + 21.68% of \$7,020.69 =	\$37,504.81
	(\$1,522.09)
Passenger maintenance of equipment expenses:	
\$129,971.53 + 78.32% of \$7,020.69 =	\$135,470.13
	(\$5,498.60)

Compare with the Atlantic City Railroad separation showing \$135,836.61 passenger maintenance of equipment expenses. This is \$366.48 greater than the suggested method. Since both methods

In re Rates—Transportation of Passengers Between Points in New Jersey.

are arbitrary, and since the difference is so small the separation submitted by the Atlantic City Railroad may be accepted as a fair one.

Traffic Expenses.

Traffic expenses were entirely divided between freight service and passenger service in the accounting.

Freight	\$2,372 37
Passenger	28,773 23
	<hr/>
	\$31,145 60

Transportation Expenses.

The total transportation expenses were \$1,555,175.52 (see C 1 below), of which \$331,483.85 were directly charged to freight service in the accounting and \$652,934.00 were directly charged to passenger service, leaving common expenses of \$170,757.67 to be divided upon suitable basis. The Atlantic City Railroad used the train mile basis (83.54% passenger) for all these common expenses without regard to the applicability of this basis to the accounts divided. In some instances it would have been better to divide the expenses common to both freight and passenger services on the basis of the directly allocated charges (66.33% passenger). The accounts having common expenses have been treated in detail below, showing suggested possible changes in method and the results that these changes would yield.

Account 61—Superintendence.

Divided on the percentage of all other accounts in the transportation group except accounts divided on "proportions of account 61."

62—Dispatching Trains.

Here the revenue train mile basis (excluding switching operations) is the best basis available.

83.54% passenger=	\$7,424 43
16.46% freight =	1,462 85
	<hr/>
	\$8,887 28

In re Rates—Transportation of Passengers Between Points in New Jersey.

63—*Station Employees.*

The common part of this account (\$58,459.83) is the largest item in the general group. While there is not necessarily interdependent relationship between station employees and train miles, it is possible to consider train miles in connection with station employees. Analysis of the reports of certain western trunk line carriers to the Interstate Commerce Commission for the year 1914, made in connection with the Western Rate Advance Case (35 I. C. C. 497) showed that "station employees per train mile" were 1.9636 times as great in the freight service as in the passenger service, switching locomotive miles being considered as freight train miles. (See *Whippany Sand Company et al. v. Delaware, Lackawanna and Western Railroad Company*, Vol. IV N. J. P. U. C. R. 214). Applying this relation to train miles on the Atlantic City Railroad for 1914, we have the following:

Freight	439,074	$\times 1.9636 =$	862,210	39.01%
Passenger	1,347,929		<u>=1,347,929</u>	60.99%
			2,210,139	

The freight part of common expenses is \$58,459.83 $\times .6099 =$ \$35,654.65, and the whole separation would become

Passenger—\$29,599 06	Direct.	Freight—\$57,517 50	Direct.
35,654 65	Apportioned.	22,805 18	Apportioned.
<u>\$65,253 71</u>	Total.	<u>\$80,322 68</u>	Total.

66—*Station Supplies and Expenses.*

The common part of this account was divided in the same way and upon the same percentages as Account 63.

Freight	\$4,975.92	+ 39.01% of \$11,931.64 =	\$9,630.45
			4,654.53
Passenger	5,115.74	+ 60.99% of \$11,931.64 =	\$12,392.85
			<u>7,277.11</u>
			\$22,023.30

 In re Rates—Transportation of Passengers Between Points in New Jersey.

Yard Operating Accounts 67-68 Inc.

The total of these accounts was stated as \$123,468.28, of which \$91,286.95 was directly charged to freight, \$28,853.37 directly charged to passenger and the remaining \$3,327.96 was called common. The entire common account was found in Account 67, "Yardmasters and their Clerks." The accounting methods necessary to form a complete separation between services of all the yard operating accounts were not disclosed, but they would necessarily be quite elaborate in order to account for all charges except the salaries of yardmasters unless, on the other hand, exclusively freight yards and exclusively passenger yards were maintained with equipment which was never moved from one service to the other. This was not shown to be the case, and further light upon the accounting methods is desirable.

In Account 67 the charges to freight were \$2,504.46 and to passenger \$440.83. Dividing the "common" account of \$3,327.96 on the percentages of the direct charges we have:

Freight	\$2,504.45 + 85.03% of \$3,327.96 =	\$5,334.22
Passenger	440.83 + 14.97% of \$3,327.96 =	939.03
		<hr/> \$6,273.25

The remainder of the yard operating accounts were tentatively accepted as stated.

*90—Interlockers and Block and Other Signals.**92—Drawbridge Operation.*

Both accounts were divided on the revenue train mile basis 83.54% passenger.

<i>Accounts.</i>	<i>Total.</i>	<i>Percentages.</i>	<i>Freight.</i>	<i>Passenger.</i>
90	\$43,707.36	83.54	.....	\$36,513.13
		16.46	\$7,194.23	.....
92	4,303.30	83.54	.....	3,594.98
		16.46	708.32	.....

In re Rates—Transportation of Passengers Between Points in New Jersey.

91—*Crossing Flagmen and Gatemen.*

This account should have been divided on the revenue train mile basis including switching locomotive miles as train miles. It thus gives freight 24.57%, passenger 75.43%.

$$\begin{array}{rcl}
 \$19,775.47 \times .2457 & = & \$4,858.83 \text{ Freight} \\
 & \times .7543 & = 14,916.64 \text{ Passenger} \\
 \hline
 & & \$19,775.47
 \end{array}$$

94—*Telegraph and Telephone Operation.*97—*Stationery and Printing.*

These accounts were divided on the percentage of Account 61, in other words, on the percentages of all other accounts in the transportation group of expenses.

When all suggested changes in the transportation expenses are made and the totals computed the result is as follows:

<i>Total Transportations Expenses (Accounts 61 to 105 inclusive).</i>	<i>Freight.</i>	<i>Passenger.</i>
\$1,155,175.52	\$382,744.42	\$772,431.10
100.00%	33.13%	66.87%

The Atlantic City Railroad gave the following:

<i>Total.</i>	<i>Freight.</i>	<i>Passenger.</i>
\$1,155,175.52	\$359,590.56	\$795,584.96
100.00%	31.13%	68.87%

It appears that the passenger train expenses were overstated by the company by about \$23,154, if the assumptions made in the paragraphs above are correct.

106-116 incl.—*General Expenses.*

All accounts in the general expense group should have been divided on the percentage of Accounts 1 to 105, inclusive (30.05 per cent. freight and 69.95 per cent. passenger) rather than on the train mile basis charging 83.54 per cent. to passenger. The difference is \$2,085.86 reduction of passenger train expenses and an equal increase of freight train expenses.

In re Rates—Transportation of Passengers Between Points in New Jersey.

Summary.

These figures were assembled including all suggested changes. The total operating expenses by the methods here outlined and by the exhibit are as follows:

	<i>Total.</i>	<i>Freight.</i>	<i>Passenger.</i>
Operating expenses from Exhibit A.			
C. R. H. 4, Sheet C.....	\$1,823,603.54	\$488,002.85 (26.76%)	\$1,335,600.69 (73.24%)
Operating expenses as herein discussed	1,823,603.54	548,034.60 (30.05%)	1,275,568.94 (69.95%)

Passenger operating expenses are \$60,031.75 greater in the exhibit. There can be no question as to the error of omitting switching operations in dividing maintenance of way expenses between freight service and passenger service. While this method of handling switching may be open to criticism, it is superior to any method which fails to consider switching.

Freight trains carry a large amount of coal, track material and other supplies used by both services. An adjustment of operating expenses to care for the excess of service done by freight trains for passenger service over the amount of traffic carried by passenger trains for freight service was not made in the exhibit, but is demanded by the facts of operation. The quantity of this adjustment is conjectural. It has been determined that a freight-carrying road found that 1.87 per cent. of total freight expenses were incurred in the interest of the passenger service, but this percentage would not be proper for the Atlantic City Railroad, whose traffic is predominately passenger. From the nature of the traffic on the two roads, it appears that double the amount suggested would about cover the adjustment on the Atlantic City. This is approximately the \$60,000 by which the passenger expenses were overstated. Considering everything, it seems that the final figures for passenger train operating expenses given in Exhibit A.C.R. H.-4 are about as nearly correct as they can be made.

Taxes.

In the exhibits taxes paid to State of New Jersey were stated for the calendar year 1914 as \$110,307.54, which is to be compared to \$149,000 total taxes accrued reported to the Board for the fiscal year. Witness Bran explained this discrepancy on the record at page 290 as the result of clearing the account for accrual of taxes.

In re Rates—Transportation of Passengers Between Points in New Jersey.

Taxes are charged monthly to income and a Tax Accrual Account credited. Taxes are paid from the Tax Accrual Account. The figure of \$110,307.54 is the proper one for the cost statement but \$149,000.00 is proper for comparative Income Account for a period of years.

Hire of Equipment.

Hire of equipment was divided in the accounting between freight and passenger. Totals given in the record were checked by the Annual Report to the Board.

Joint Facility Rents.

The credits for this account were stated in the exhibit, but not the debits. The percentages given in the exhibit have been applied to the proper balance as found in the Annual Report to the Board, and Miscellaneous Rents, debit balance, has been added in order to complete the consideration of all income items affected by transportation operations.

All cost figures have been assembled on the following page. By *cost* is meant operating expenses, taxes, hire of equipment, joint facility rents and miscellaneous rents.

ATLANTIC CITY RAILROAD.

Year Ended June 30th, 1914.

FREIGHT-PASSENGER SEPARATION OF OPERATING EXPENSES AND OTHER COSTS.

	<i>Total.</i>	<i>Freight.</i>	<i>Passenger.</i>
Maintenance of way and structures	\$448,959.01	\$86,375.23	\$362,583.78
Maintenance of equipment.....	172,974.94	37,138.33	135,836.61
Traffic expenses	31,145.60	2,372.37	28,773.23
Transportation expenses	1,155,175.52	359,590.56	795,584.96
General expenses	15,348.47	2,526.36	12,822.11
 Total operating expenses.....	 \$1,823,603.54	 \$488,002.85	 \$1,335,600.69
		26.76%	73.24%
 Railway tax accruals.....	 \$110,307.54	 \$19,310.79	 \$90,996.75
Hire of equipment, Dr. Bal.....	264,337.76	146,265.68	118,072.08
Joint facility and miscellaneous rents, Dr. Bal.*.....	11,743.38	3,458.42	8,284.96
 Total costs	 \$2,209,902.22	 \$657,637.74	 \$1,552,264.48

* Divided on basis of credits, Exhibit A. C. R. II-4, page E. 70.55 per cent. passenger.

In re Rates—Transportation of Passengers Between Points in New Jersey.

Revenues.

A statement of certain operating revenues divided between freight service and passenger service appeared on page B of Exhibit A.C.R.H.-4. This was incomplete and certain of the revenues do not check the totals from the Annual Report to the Board. The discrepancies are in all cases quite small, being less than 1%. A complete statement of revenues has been prepared and the division between services made in accordance with facts as far as possible, using percentages from the exhibit to divide the items of revenues which were common to both services. It appears that 67.04% of the revenue is derived from passenger train and allied service.

ATLANTIC CITY RAILROAD.

Year Ended June 30th, 1914.

OPERATING REVENUES.

	<i>Total.</i>	<i>Freight.</i>	<i>Passenger.</i>
1. Freight	\$759,793.27	\$759,793.27	.....
2. Passenger	1,478,529.86	.....	\$1,478,529.86
3. Excess baggage	2,119.93	.....	2,119.93
4. Parlor and chair.....	.....	.....	.....
5. Mail	10,858.71	.....	10,858.71
6. Express	64,796.61	.....	64,796.61
7. Milk	9,420.55	.....	9,420.55
8. Other passenger trains.....	8,603.55	.....	8,603.55
9. Switching	8,549.22	8,549.22	.....
10. Special service train.....	196.50	196.50	.....
11. Misc. transportation revenue..	.....	.....	.....
12. Station and train privileges..	5,409.05	.....	5,409.05
13. Parcel room	1,956.95	.....	1,956.95
14. Storage—Freight	97.24	97.24	.....
15. Storage—Baggage	453.65	.....	453.65
16. Car service	8,718.00	8,718.00	.....
17. Telegraph and telephone*....	776.19	255.83	520.36
18. Rents of buildings†.....	869.34	161.35	707.99
19. Miscellaneous†	855.25	702.84	152.41
20. Joint facility Dr.....	.....	.....	.....
21. Joint facility Cr.....	.....	.....	.....
Total	\$2,362,003.87	\$778,474.25 32.96%	\$1,583,529.62 67.04%

*Divided overhead to all other revenues (67.04% passenger).

†Divided on percentages computed from Exhibit A. C. R. H. 4, page B (rents of buildings, 81.44% passenger; miscellaneous rents, 17.82% passenger).

In re Rates—Transportation of Passengers Between Points in New Jersey.

Operating Ratios.

Operating ratio is the result, expressed in per cent., of dividing the operating expenses by the revenues. In other words, it is the percentage of revenues required to meet operating expenses. Taxes and other costs (such as hire of equipment) are not operating expenses in this sense.

From the revenues and expenses found above, the operating ratios for all traffic and for freight and passenger have been computed and are shown in the following table:

	<i>Total.</i>	<i>Freight.</i>	<i>Passenger.</i>
Operating revenues	\$2,362,004	\$778,474	\$1,583,530
Operating expenses	1,823,604	488,003	1,335,601
Operating ratio (per cent.).....	77.21	62.69	84.34

The operating ratio is not the proper measure of the relative profitableness of the two services for several reasons. The Atlantic City Railroad owns but little equipment, and must pay for hire of equipment an amount almost 15% as great as the total operating expenses. Furthermore, expenditures for taxes are as much expenses of operation as wages or expenditures for material, but are not included in the classification of operating expenses by the Interstate Commerce Commission. The proper measure of the profitableness of the whole traffic is the ratio of total costs to revenue. These ratios are for the total traffic 93.56%, for freight 84.40%, and for passenger 98.07%.

Valuation and Rate of Return.

No testimony was introduced by the Atlantic City Railroad showing a valuation of the property greater than the assessed valuation. The assessed value for the year 1914 was \$5,586,486, and the book cost of road and equipment was \$8,756,108, as shown in their balance sheet for the year ended June 30th, 1914. The assessed value is \$32,800 per mile and the book cost is \$51,500 per mile. There is nothing to show that the higher figure represents investment in the property. The assessed value must, therefore, be considered as the better measure of the valuation of the property.

 In re Rates—Transportation of Passengers Between Points in New Jersey.

The amount available for the return upon the investment before deductions are made for additions and betterments is the revenue minus the total cost. The revenue, costs, amount available for return and the rate of return upon the investment are set forth in the following table: (Since the passenger train service shows such a small return it is not necessary to make a division of valuation between freight and passenger.)

	<i>Total.</i>	<i>Freight.</i>	<i>Passenger.</i>
Railway operating revenues.....	\$2,362,004	\$774.74	\$1,583,530
Percentages	100%	32.96%	67.04%
Total costs	2,209,992	657,038	1,552,954
Percentages	100%	29.73%	70.27%
Net available from railway operations for return on the investment.....	152,012	121,436	30,576
Assessed valuation	5,586,486		
Rate of return on the assessed value...	2.72%		

Note that the rate of return on the investment resulting from railway operations is but 2.72 per cent., and that this figure does not have any relation to the methods used in dividing revenues and expenses between services. It is the result of all operations. The net return from railway operations (\$152,012) is not the final corporate income. Other items must be considered as follows:

Net revenue from railway operations as shown.....	\$152,012
Loss on outside operations (Delaware River transfers).....	36,360
Net revenue from all operations.....	\$115,652
Other income items (non-operating).....	4,770
Gross corporate income	\$120,422
Interest on funded and other debt.....	207,872
Net corporate income (loss)	\$87,450
Additions and betterments.....	71,183
Total loss	\$158,633

Something has been said below concerning the losses in other years. Items below check the income account for 1914, in which taxes were included at \$149,000 to clear up past balances. In a comparative statement for a series of years these are proper figures. Amounts overstated one year would be understated in the other years.

In re Rates—Transportation of Passengers Between Points in New Jersey.

Considering the relation of passenger train revenues to passenger train costs, it will be noted that this service contributes 67.04 per cent. of the revenues and incurs 70.27 per cent. of the total costs. This shows that passenger service is relatively less remunerative than freight service on the Atlantic City Railroad.

Income accounts of the Atlantic City Railroad for the years 1914 and 1915 were stated in the exhibit A.C.-2-R.H. and for the years 1908 and 1914, inclusive, in exhibit A.C.-8. Total corporate losses and amounts paid for additions and betterments for these years are as follows:

YEAR.	Corporate Loss.	Additions and Betterments (Included in Net Corporate Loss).
1908	\$326,082	\$95,564
1909	124,068	7,169
1910	254,611	151,607
1911	87,245	45,127
1912	60,000	53,349
1913	193,559	76,474
1914	197,326	71,184
1915	310,285	119,294
Total	<u>\$1,553,176</u>	<u>\$619,768</u>

The table speaks for itself. The average corporate loss for the eight years was \$194,147, from which it seems that 1914 was a fairly representative year. The depression of 1914-1915 had not set in by June, 1914. The average annual expenditure for additions and betterments for the eight years was \$77,471, which is to be compared with \$71,184 for 1914.

Division of Passenger Train Expenses Between Strictly Passenger Expenses and the Expense of Other Operations on Passenger Trains.

Total operating expenses and other costs were divided by the company between strictly passenger service and other service on passenger trains (mail, express, milk) on the car mile basis, giving 91.41% strictly passenger. From the revenue statement it will be noted that passenger revenue plus excess baggage revenue was 93.50% of the total passenger train revenue and that total strictly passenger revenue was 94.09% of the total. Apparently passenger

In re Rates—Transportation of Passengers Between Points in New Jersey.

is slightly more profitable than other passenger train service, but proof of this is found only in the statement of the division between services on passenger trains. Mail pay is fixed by the United States Post Office Department, and express rates are fixed by the Interstate Commerce Commission. It cannot be assumed that under normal conditions these rates are unremunerative. Necessarily arbitrary divisions of combination cars entering into the compilation of the car mile basis makes it impossible on this record to distinguish between the various services on passenger trains. It is probable that all services on passenger trains are about equally profitable. 91.41% of the total operating expenses of \$1,335,600.69 was \$1,220,872.59. 91.41% of the total passenger costs of \$1,552,954.48 was \$1,419,555.69, using actual taxes and other figures derived above. This cost was met by revenue from passengers (\$1,478,529.86), from excess baggage (\$2,119.93), and from incidental operations (\$9,262.36), amounting, in all, to \$1,489,912.15. Strictly passenger operating ratio was 81.94 per cent. Total cost was 95.28 per cent. of the revenue, while for passenger train service as a whole the total cost was 98.07 per cent. of the revenue. The same conclusion must be reached for both, namely that the present revenue is inadequate.

Division of Strictly Passenger Traffic Between Intrastate and Interstate.

The Atlantic City Railroad divided operating expenses and other costs between intrastate and interstate service on the basis of revenues in the two services. 11.11% of the passenger revenue was intrastate during the year ended June 30th, 1914. This method of division must show that intrastate and interstate business are equally unprofitable, but such a basis is not a fair one. Since revenues are used for the purpose of dividing expenses, the ratio in the various divisions of the services must necessarily be the same. The entire property of the Atlantic City Railroad is within the State of New Jersey. Any interstate traffic must of necessity move upon the same tracks as intrastate traffic. The expense of an interstate passenger and an intrastate passenger for the same distance must be about equal. Since the whole passen-

In re Rates—Transportation of Passengers Between Points in New Jersey.

ger traffic is unprofitable, the conclusion necessarily follows that the intrastate passenger traffic is unprofitable. Other considerations point to the conclusion that intrastate traffic would be less profitable than interstate traffic. Fares are generally made up on the mileage basis and since interstate traffic has a longer haul than intrastate traffic, the terminal expense (independent of the distance traveled) could more readily be met from the revenue of a long haul than from the revenue of a short haul.

A large part of the intrastate traffic of the Atlantic City Railroad moves into and out of Camden, and a large part of the interstate traffic moves into and out of Philadelphia. In the past, tickets have read "Camden or Philadelphia," so that the expense of an interstate passenger to Philadelphia will consist of the expense of an intrastate passenger to Camden plus the ferry expense from Camden to Philadelphia.

Intrastate traffic and interstate traffic cannot exist upon different levels of profitableness when the whole line is within a single State and fares are made upon the same basis. As mentioned above, a large part of the tickets read "Philadelphia or Camden" and it is equally impossible to distinguish between the cost and the use of such tickets in intrastate or interstate travel. The whole of the passenger traffic yields insufficient revenue. It is reasonable to conclude, therefore, that the intrastate passenger traffic yields insufficient revenue.

It seems evident that the Atlantic City Railroad has fully sustained the burden of proof as to the need of more money. Exhibits A.C.-3 and A.C.-19 were introduced to show approximately the additional revenue to be derived from the proposed changes in fares. The estimated increase (\$80,150), would not meet the average annual loss.

The proposed increase in commutation rates and a partial increase in excursion rates have been justified. We think the excursion rate generally should not exceed 175% of one-way fare.

In re Rates—Transportation of Passengers Between Points in New Jersey.

(A)

A. C. R. H-4.

ATLANTIC CITY RAILROAD COMPANY.

STRICTLY PASSENGER INTRASTATE, INCOME ACCOUNT.

Year ended June 30th, 1914.

Operating revenues—	
Passenger	\$164,244.52
Excess baggage	710.54
Special excursion—Burlington to Atlantic City.....	53.36
Revenue from operations other than transportation (B).....	1,029.05
	<hr/>
	\$166,037.77
Operating expenses	(C)..... 135,638.94
	<hr/>
Net operating revenue.....	\$30,398.83
Taxes	(D)..... 9,241.31
	<hr/>
Net operating income.....	\$21,157.52
Joint facility rent income.....	(E)..... 3,371.74
	<hr/>
Total income	\$24,529.26
Deductions from income—	
Hire of equipment, debit balance.....	(F)..... 11,990.99
	<hr/>
Net operating income.....	\$12,538.27
Other deductions—	
Interest on funded debt.....	(G)..... 17,635.97
	<hr/>
Loss	\$5,097.70

(B)

ATLANTIC CITY RAILROAD COMPANY.

REVENUE FROM OPERATIONS OTHER THAN TRANSPORTATION.
INTRASTATE TRAFFIC.

Year ended June 30th, 1914.

	Passenger.	Freight.	—Strictly passenger—	
			100%	Amount.
Station and train privileges...	\$5,804.53	None	100%	\$5,804.53
Parcel room receipts.....	1,956.95	None	100%	1,956.95
Storage freight	None	\$96.34	.....	.....
Car service	None	8,718.00	.....	.....
Telegraph and telephone.....	465.51	465.51	100%	465.51
Rent of building and other property	476.60	108.60	100%	476.60

In re Rates—Transportation of Passengers Between Points in New Jersey.

	<i>Passenger.</i>	<i>Freight.</i>	<i>(Strictly Passenger.)</i>	
				<i>Amount.</i>
Miscellaneous—Weighing	None	\$354.00	.....	.....
Miscellaneous—Rent House...	\$49.00	None	100%	\$49.00
Miscellaneous—Merchandise ..	None	130.85	.....	.....
Miscellaneous—Drinking Cups,	56.12	None	100%	56.12
Storage—Baggage	453.65	None	100%	453.65
Total	\$9,262.36	\$9,873.31	.....	\$9,262.36

Apportioned to intrastate service on basis of the percentage of intrastate passenger revenue to total passenger revenue—
11.11% of \$9,262.36..... \$1,029.05

(C)

ATLANTIC CITY RAILROAD COMPANY.

STATEMENT OF APPROXIMATE OPERATING EXPENSES ACCRUING TO THE STRICTLY PASSENGER INTRASTATE.

Year ended June 30th, 1914.

	<i>Common.</i>	<i>Freight.</i>	<i>Passenger.</i>
Maintenance of way and structures (C-2)	\$424,482.80	\$16,505.36	\$7,970.85
Maintenance of equipment (C-2)	7,020.69	35,982.72	129,971.53
Traffic expenses (C-3) .....	.....	2,372.37	28,773.23
Transportation expenses (C-1)	170,757.67	331,483.85	652,934.00
General expenses (C-3)	15,348.47	.....	.....
Total operating expenses.....	\$617,609.63	\$386,344.30	\$819,649.61

Common Item divided between passenger and freight on revenue train mileage basis—Passenger, 83.54%..... 515,951.08

Total passenger expense..... \$1,335,000.69

Strictly Passenger—

Determined by equating the passenger car miles, 91.41%..... \$1,200,872.59

Strictly Passenger—Intrastate—

Percentage of intrastate passenger revenue to total passenger revenue, 11.11% \$135,638.94

In re Rates—Transportation of Passengers Between Points in New Jersey.

(C-1)

ATLANTIC CITY RAILROAD COMPANY.

TRANSPORTATION EXPENSES.

Year ended June 30th, 1914.

<i>Account.</i>	<i>Direct Passenger.</i>	<i>Direct Freight.</i>	<i>Common.</i>
Superintendence .....	.....	.....	\$11,714.42
Dispatching trains .....	.....	.....	8,887.28
Station employees	\$29,599.06	\$57,517.50	58,459.83
Station supplies and expenses.....	5,115.74	4,975.92	11,931.64
Yardmasters and their clerks.....	440.83	2,504.46	3,327.96
Yard conductors and brakemen.....	12,321.07	43,792.75	.....
Yard supplies and expenses.....	10.35	317.94	.....
Yard enginemen	6,697.28	21,134.26	.....
Engine house expenses—yard.....	2,055.30	6,010.93	.....
Fuel for yard locomotives.....	9,257.91	23,074.40	.....
Water for yard locomotives.....	341.01	861.05	.....
Lubricants for yard locomotives.....	165.21	395.14	.....
Other supplies for yard locomotives...	149.68	434.00	.....
Operating joint yards and terminals...	Cr. 2,585.27	Cr. 7,237.98	.....
Road enginemen	99,006.76	30,460.21	.....
Engine house expenses—road.....	40,244.52	11,768.38	.....
Fuel for road locomotives.....	238,153.30	56,788.91	.....
Water for road locomotives.....	8,197.34	2,811.86	.....
Lubricants for road locomotives.....	6,376.93	1,114.44	.....
Other supplies for road locomotives...	3,128.17	1,104.13	.....
Road trainmen	117,100.60	48,818.95	.....
Train supplies and expenses.....	57,968.10	3,174.04	.....
Interlockers, block and other signal operation .....	.....	.....	43,707.36
Crossing flagmen and gatemen.....	.....	.....	19,775.47
Drawbridge operation .....	.....	.....	4,303.30
Clearing wrecks	873.15	1,785.04	.....
Telegraph and telephone operation...	.....	.....	197.96
Stationery and printing.....	.....	.....	8,452.45
Other expenses	183.79	20.00	.....
Loss and damage—freight.....	.....	14,511.35	.....
Loss and damage—baggage.....	173.05	.....	.....
Damage to property.....	14,898.35	481.76	.....
Damage to stock on right of way.....	516.00	.....	.....
Injuries to persons.....	8,646.20	3,402.72	.....
Operating joint tracks and facilities, Dr.,	6,846.73	3,871.65	.....
Operating joint tracks and facilities.....	Cr. 13,547.16	Cr. 2,409.96	.....
	\$652,934.00	\$331,483.85	\$170,757.67

In re Rates—Transportation of Passengers Between Points in New Jersey.

(C-2)

ATLANTIC CITY RAILROAD COMPANY.

Year ended June 30th, 1914.

MAINTENANCE OF WAY AND STRUCTURES.

<i>Account.</i>	<i>Direct Passenger.</i>	<i>Direct Freight.</i>	<i>Common.</i>
Superintendence			\$20,606.45
Ballast			4,156.10
Ties			121,530.78
Rails			11,835.44
Other track material.....			49,493.87
Roadway and track.....			164,680.49
Removal of snow, sand and ice.....			7,994.70
Bridges, trestles and culverts.....			17,920.23
Over and under grade crossings.....			1,684.81
Grade crossings, fences, cattle guards and signs			7,769.47
Signals and interlocking plants.....			24,961.81
Telegraph and telephone.....			3,457.04
Buildings, fixtures and grounds.....	\$7,970.85	\$7,160.19	18,091.83
Docks and wharves.....		9,345.17	
Roadway, tools and supplies.....			5,260.53
Injuries to persons.....			17.03
Stationery and printing.....			115.04
Maintenance of joint tracks, and other facilities, Dr.			2,495.04
Maintenance of joint tracks, and other facilities			Cr. 37,587.86
	<u>\$7,970.85</u>	<u>\$16,505.36</u>	<u>\$424,482.80</u>

MAINTENANCE OF EQUIPMENT.

Superintendence			\$2,555.59
Steam locomotives—repairs.....	\$55,269.90	\$18,731.90	
Steam locomotives—renewals.....	6,312.10		
Steam locomotives—depreciation.....	5,749.73	283.41	
Passenger train cars—repairs.....	45,824.80		
Passenger train cars—renewals.....			
Passenger train cars—depreciation....	16,814.91		
Freight train cars—repairs.....		16,848.85	
Freight train cars—renewals.....			
Freight train cars—depreciation.....		118.56	
Work equipment—repairs.....			2,159.39

In re Rates—Transportation of Passengers Between Points in New Jersey.

<i>Account.</i>	<i>Direct Passenger.</i>	<i>Direct Freight.</i>	<i>Common.</i>
Work equipment—renewals.....	\$921.14
Work equipment—depreciation.....	178.07
Shop machinery and tools.....	1,001.59
Injuries to persons.....	5.90
Stationery and printing.....	194.16
Other expenses	5.75
	<u>\$129,971.53</u>	<u>\$35,982.72</u>	<u>\$7,020.69</u>

(C-3)

ATLANTIC CITY RAILROAD COMPANY.

Year ended June 30th, 1914.

TRAFFIC EXPENSES.

<i>Account.</i>	<i>Direct Passenger.</i>	<i>Direct Freight.</i>	<i>Common.</i>
Superintendence	\$3,914.42	\$1,796.98	.....
Outside agencies	9,293.87	497.53	.....
Advertising	15,211.01	.....	.....
Traffic associations	5.00	7.66	.....
Stationery and printing.....	348.93	70.20	.....
	<u>\$28,773.23</u>	<u>\$2,372.37</u>	<u>.....</u>

GENERAL EXPENSES.

	<i>Common.</i>
Salaries and expenses of general officers.....	\$607.79
Salaries and expenses of clerks and attendants.....	1,452.07
General office supplies and expenses	204.85
Law expenses	3,578.53
Insurance	6,030.43
Relief department expenses.....	604.34
Pensions	2,238.76
Stationery and printing.....	476.50
Valuation expenses	53.17
Other expenses	383.02
General administration, junction, tracks, yards and terminal, Dr..	.....
General administration, junction, tracks, yards and terminal.....	Cr. 281.59
	<u>\$15,348.47</u>

In re Rates—Transportation of Passengers Between Points in New Jersey.

(D)

ATLANTIC CITY RAILROAD COMPANY.

TAXES ACCRUING TO STRICTLY PASSENGER INTRASTATE.

Calendar Year 1914.

	<i>Common.</i>	<i>Passenger.</i>
Main stem—\$3,641,341.00 @ \$2.024 per \$100 valuation	\$73,700.74	.....
Franchise—\$1,000.00 @ \$2.024 per \$100 valuation..	20.24	.....
Tangible personal property (D-2)	955.71	\$16,752.63
Real estate used for railroad purposes other than main stem (D-1)	10,558.67	2,792.68
United States Government	294.25	.....
	<u>\$85,529.61</u>	<u>\$19,545.31</u>

Common Item apportioned to passenger on the basis of revenue train miles, 83.54%

	71,451.44
--	-----------

Total passenger	\$90,996.75
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Strictly Passenger, determined by equating the passenger car miles, 91.41%

	83,180.13
--	-----------

Strictly Passenger Intrastate, percentage of intrastate passenger revenue to total passenger revenue, 11.11%

	9,241.31
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(D-1)

ATLANTIC CITY RAILROAD COMPANY.

TAX ON TANGIBLE PERSONAL PROPERTY.

Valuation as of January 1st, 1914, for the calendar year of 1914.

	<i>Common.</i>	<i>Freight.</i>	<i>Passenger.</i>
Shop machinery and tools	\$11,151.00	.....	.....
Miscellaneous road equipment	36,008.00	.....	.....
Switching locomotives, 5 @ \$4,817— \$24,085.00. Divided between passen- ger and freight on basis of switching locomotive miles. Freight, 75.71%; passenger, 24.29% .....	.....	\$18,234.75	\$5,850.25
Floating equipment .....	.....	14,731.00	.....
Freight train cars .....	.....	106,394.00	.....
Passenger train cars .....	.....	.....	696,570.00
Passenger locomotives, 26 @ \$4,817... ..	.....	.....	125,279.00
Freight locomotives, 12 @ \$4,817.....	.....	57,804.00	.....
	<u>\$47,219.00</u>	<u>\$197,163.75</u>	<u>\$827,699.25</u>
Taxed at \$2.024 per \$100 valuation...	955.71	3,990.59	16,752.63

In re Rates—Transportation of Passengers Between Points in New Jersey.

(D-2)

ATLANTIC CITY RAILROAD COMPANY.

TAX ON REAL ESTATE USED FOR RAILROAD PURPOSES, OTHER THAN MAIN STEM.

Valuation as of January 1st, 1914, for calendar year 1914.

	<i>Passenger.</i>	<i>Freight.</i>	<i>Common.</i>
Main Line:			
Camden City	\$435.82	\$338.97	\$4,067.65
Haddon Township	38.85	.....	.....
Collingswood Borough	1.55	5.49	.....
Oaklyn Borough	9.62	.61	.....
Audubon Borough	74.07	.93	17.59
Haddon Heights	51.22	60.12	.....
Centre Township	27.00	12.00	10.99
Clementon Township	71.35	12.46	29.45
Laurel Springs Borough.....	23.32	8.88	4.81
Winslow Township	126.57	19.69	135.01
Town of Hammonton.....	42.15	29.86	15.80
Mullica Township	29.97	31.28	3.91
Galloway Township	30.13	3.62	86.76
Egg Harbor Township.....	.66	.....	32.52
Pleasantville City	1.10	.....	49.07
Atlantic City	614.51	335.18	4,636.70
Gloucester Branch:			
City of Camden.....	.....	.....	9.36
Gloucester City	22.74	5.41	80.12
Centre Township	77.31	3.60	8.99
Gloucester Township	64.21	14.93	70.18
Williamstown Branch:			
Waterford Township .....	.....	.....	9.41
Winslow Township .....	.91	1.37	20.55
Monroe Township	17.94	7.47	124.04
Glassboro Township	1.18	11.79	10.61
Harrison Township	58.87	28.49	102.55
Glassboro Branch:			
Glassboro Township	48.61	23.34	25.28
Baltic Ave. Branch:			
Atlantic City	295.97	29.97	48.71
Sea Isle City Branch:			
Winslow Township .....	.....	.....	2.41
Town of Hammonton.....	.....	.....	.22
Folsom Borough	8.01	2.34	23.02
Buena Vista Township.....	19.64	6.97	5.07
Weymouth Township	4.46	.....	23.42
Upper Township	54.00	10.97	19.40
Sea Isle City Township.....	57.39	4.30	81.78

In re Rates—Transportation of Passengers Between Points in New Jersey.

	<i>Passenger.</i>	<i>Freight.</i>	<i>Common.</i>
Ocean City Branch:			
Upper Township	\$10.97	\$5.64	\$13.05
Ocean City	156.74	52.25	313.48
Cape May Branch:			
Woodbine Borough			5.85
Dennis Township	21.25	24.15	2.89
Middle Township	112.20	30.77	38.00
Lower Township	8.50	31.88	172.17
West Cape May .....		.36	35.66
Cape May City	173.89	86.94	222.19
Totals	\$2,792.68	\$1,242.03	\$10,558.67

(E)

ATLANTIC CITY RAILROAD COMPANY.

JOINT FACILITY RENT INCOME APPORTIONABLE TO STRICTLY PASSENGER
INTRASTATE.

Year ended June 30th, 1914.

Central Railroad of N. J.—

Operations of through passenger trains between New York and
Atlantic City over A. C. R. R. tracks between Winslow
Junction and Atlantic City..... \$7,548.38

West Jersey and Seashore R. R.—

Joint use of Atlantic City R. R. tracks between Winslow Junc-
tion and Woodbine Junction..... 32,193.79

\$39,742.17

Divided between passenger and freight on basis of revenue train
miles. Passenger, 83.54%..... 33,200.61

Strictly Passenger, determined by equating the car miles, 91.41% 30,348.68

Strictly Passenger Intrastate, percentage of intrastate passenger
revenue to total passenger revenue, 11.11%..... 3,371.74

In re Rates—Transportation of Passengers Between Points in New Jersey.

(F)

ATLANTIC CITY RAILROAD COMPANY.

STATEMENT OF HIRE OF EQUIPMENT—DR. BALANCE APPORTIONABLE TO THE
STRICTLY PASSENGER INTRASTATE.

Year ended June 30th, 1914.

	<i>Common.</i>	<i>Freight.</i>	<i>Passenger.</i>
Locomotives .....	.....	\$40,694.19	\$76,849.75
Locomotives .....	.....	.....	Cr. 5,511.82
Cars .....	.....	104,878.21	33,358.41
Cars .....	.....	.....	Cr. 728.23
Work equipment	Cr. 185.38	.....	.....
Private cars .....	.....	723.79	14,258.84
	Cr. \$185.38	\$146,296.19	\$118,226.95
<i>Common Item</i> divided on basis of revenue train miles. <i>Passenger</i> , 83.54%			
			Cr. 154.87
Total passenger			\$118,072.08
<i>Strictly Passenger</i> , determined by equating the passenger car miles, 91.41%			
			107,929.69
<i>Strictly Passenger Intrastate</i> , percentage of Intrastate passenger revenue to total passenger revenue, 11.11%			
			11,990.99

SECTION II.

WEST JERSEY AND SEASHORE RAILROAD.

Statements of costs and revenues for year ended December 31st, 1914, of—

1. Passenger train service;
2. Strictly passenger service, both intrastate and interstate;
3. Intrastate passenger service,

on the West Jersey and Seashore, and on each division of the Pennsylvania Railroad operating in New Jersey, were filed in the record as Exhibit P.R.R.-11-R.H. The West Jersey and Seashore has been analyzed here and the Pennsylvania Railroad in another section of the report.

The following comparison was made to try to discover the method of separating operating expenses between freight service and passenger service. All West Jersey and Seashore figures were for the calendar year unless otherwise stated. The amounts given as "passenger" were taken from Exhibit P.R.R.-11R.H., pages 49 and 50. Totals were taken from the printed calendar year report to stockholders for 1914, which was made a part of the record.

Freight amounts are the differences between the reported totals and the reported passenger train amounts for each account.

FREIGHT. PASSENGER SEPARATION OF OPERATING EXPENSES.

Maintenance of Way and Structures.

The separation by primary accounts, compiled from the annual report and from Exhibit P.R.R.-11R.H., was as follows:

In re Rates—Transportation of Passengers Between Points in New Jersey.

	<i>Total.</i>	<i>Freight.</i>		<i>Passenger.</i>	
		<i>Amount.</i>	%	<i>Amount.</i>	%
1. Superintendence	\$57,000.22	\$11,151.94	19.56	\$45,857.28	80.44
2. Ballast	9,139.61	1,416.18	15.49	7,723.43	84.51
3. Ties	173,775.88	32,490.91	18.70	141,284.97	81.30
4. Rails	14,661.09	3,002.70	20.48	11,658.39	79.52
5. Other track material.....	23,353.46	4,483.73	19.20	18,869.73	80.80
6. Roadway and track.....	306,200.22	70,700.23	23.09	235,500.00	76.91
7. Removal of snow, sand and ice.....	26,405.62	5,452.95	20.58	21,042.67	79.42
9. Bridges, trestles and culverts.....	43,079.22	7,203.33	16.72	35,875.89	83.28
10-11. Crossings and signs.....	45,162.50	8,779.48	19.44	36,383.02	80.56
12. Snow and sand fences.....	.....	.....	.....	.....	.....
13. Signals and interlockers.....	58,753.83	8,663.65	14.75	50,090.18	85.25
Do.—Depreciation	816.00	.....	.....	816.00	100.00
14. Telegraph and telephone lines.....	26,888.93	4,842.07	18.01	22,046.86	81.99
15. Electric power transmission.....	18,593.33	2,183.65	11.74	16,409.68	88.26
Do.—Depreciation	38,393.00	3,623.81	9.44	34,769.19	90.56
16. Buildings, fixtures and grounds.....	61,936.77	11,765.08	19.00	50,171.69	81.00
Do.—Depreciation	5,891.00	580.36	9.85	5,310.64	90.15
17. Docks and wharves.....	15,373.20	15,359.16	99.91	14.13	0.00
18. Roadway, tools and supplies.....	11,441.89	2,610.03	22.81	8,831.86	77.19
19. Injuries to persons.....	3,452.55	600.78	17.40	2,851.77	82.60
20. Stationery and printing.....	2,150.21	435.95	20.27	1,714.26	79.73
Insurance	2,168.57	381.69	17.60	1,786.88	82.40
21. Other expenses.....	336.31	67.89	20.19	268.42	79.81
22-23. Maintenance joint tracks, yards and facilities..	94,506.94	31,543.87	33.38	62,963.07	66.62
Total maintenance of way and structures....	\$1,039,588.44	\$227,339.44	21.87	\$812,249.00	78.13

In re Rates—Transportation of Passengers Between Points in New Jersey.

From these figures, and from the character of the separation, we know that certain items were directly charged and the remainder divided on some arbitrary basis. For some reason the formula used was not disclosed on the record, nor do we know that the same basis was used for all accounts. Revenue train miles for the same period were as follows:

	<i>Total.</i>	<i>Freight.</i>		<i>Passenger.</i>	
		<i>Amount.</i>	<i>%</i>	<i>Amount.</i>	<i>%</i>
Freight	498,006	498,006	.....	.....	.....
Passenger	3,008,879	.....	.....	3,008,879	.....
Total freight and passenger..	3,506,885	498,006	14.20	3,008,879	85.80
Mixed	31,657	23,743	75.00	7,914	25.00
Special	4,585	1,250	actual	3,335	actual
Total revenue train miles....	3,543,127	522,999	14.76	3,020,128	85.24
Train switching locomotive miles,	78,138	78,138	100.00	.....	.....
Yard switching locomotive miles,*	202,624	169,698	83.75	32,926	16.25
Total	3,823,880	770,835	20.16	3,053,054	79.84

*Divided between freight and passenger on year June 30th, 1915, figures from preliminary abstract.

Freight	168,257	83.75%
Passenger	32,658	16.25%
Total	200,915	

The results of the division by the carrier gave 78.13% of Maintenance of Way and Structure to passenger. The train-mile basis, considering switching locomotive miles as train miles, gave 79.84 per cent. passenger. The close agreement of these percentages shows that switching was apparently cared for in a proper manner. Most of the ballast would naturally be found on the main stem tracks and very little in yards. The train-mile basis for all revenue road trains was 85.24 per cent. passenger. The passenger part of the ballast account was given as 84.51% passenger in the carrier's exhibit. In Account Number 3, Ties, 81.30% was passenger, and in Account 4, Rails, 79.52% was passenger. These percentages agree with the percentage of revenue train miles, including switching locomotive miles as train miles, and dividing them

In re Rates—Transportation of Passengers Between Points in New Jersey.

between freight service and passenger service for the year ended December 31st, 1914, on the percentages for the year ended June 30th, 1915. Similar observations might be made as to the other accounts under Maintenance of Way and Structures.

Account 15. Electric Power Transmission and the Depreciation Account, which has been called 15-A, are divided between freight and passenger services, charging 90% to passenger. In Maintenance of Equipment Accounts 47 and 47-A, a similar division appears, while "Operation of Power Plants" (Account 86) and "Motormen" (Account 79), are all charged to passenger. The basis of the several divisions are not made parts of the record, and it is, therefore, difficult to form an opinion as to the reasons for the several treatments given. But in Exhibit P.R.R.-9-R.H. all additions and betterments for electrification were charged to passenger service. From this it is concluded that all electric operating expense accounts should have been charged to passenger in their entirety.

Account 16-A. Depreciation of Buildings is composed entirely of depreciation of power plant and substation buildings (Exhibit P.R.R.-37-R.H.) and should have been charged to passenger. Accounts 15, 15-A, 16-A, 47 and 47-A should be revised accordingly. These changes would decrease freight operating expenses \$12,640 and increase passenger train expenses the same amount.

Maintenance of Equipment.

The separation by primary accounts, compiled from the annual report and from Exhibit P.R.R.-11-R.H., was, as shown by the following:

In re Rates—Transportation of Passengers Between Points in New Jersey.

	Total.	Freight.		Passenger.	
		Amount.	%	Amount.	%
24. Superintendence	\$43,108.18	\$10,056.91	23.33	\$33,051.27	76.67
25. Steam locomotives—Repairs	288,125.77	65,867.31	22.86	222,258.46	77.14
27. Steam locomotives—Depreciation	55,802.86	12,543.31	22.56	43,059.55	77.44
31. Passenger train cars—Repairs.....	184,002.97	.....	.....	184,002.97	.....
32. Passenger train cars—Renewals.....	4,140.14	.....	.....	4,140.14	.....
33. Passenger train cars—Depreciation.....	87,044.37	.....	.....	87,044.37	.....
34. Freight train cars—Repairs.....	77,922.75	77,922.75	.....	.....	.....
35. Freight train cars—Renewals.....	703.21	703.21	.....	.....	.....
36. Freight train cars—Depreciation.....	25,199.10	25,199.10	.....	.....	.....
37. Electric equipment of cars—Repairs.....	44,927.66	.....	.....	44,927.66	.....
39. Electric equipment of cars—Depreciation.....	37,008.00	.....	.....	37,008.00	.....
40. Floating equipment—Repairs	8,850.01	8,740.00	98.76	110.01	1.24
41. Floating equipment—Renewals	4,883.17	4,883.17	.....	.....	.....
42. Floating equipment—Depreciation	5,742.14	5,742.14	.....	.....	.....
43. Work equipment—Repairs	10,747.80	2,330.70	21.68	8,418.10	78.32
44. Work equipment—Renewals	17.00	3.79	22.29	13.21	77.71
45. Work equipment—Depreciation	1,193.84	274.51	22.99	919.33	77.01
46. Shop machinery and tools.....	875.89	Cr. 22.55	.....	898.44	.....
47. Power plant equipment.....	7,898.60	863.75	10.94	7,034.85	89.06
Power plant equipment—Depreciation.....	54,691.00	5,398.26	9.85	49,302.74	90.15
48. Injuries to persons.....	842.81	180.48	21.41	662.33	78.59
49. Stationery and printing.....	2,119.57	437.31	20.63	1,682.26	79.37
Insurance	3,502.00	773.55	22.23	2,728.45	77.77
50. Other expenses	272.82	136.88	50.17	135.94	49.83
51. Maintenance joint equipment at terminal, 19.....	34,393.97	26,486.28	77.01	7,907.69	22.99
Total maintenance of equipment.....	\$983,816.63	\$248,515.86	25.26	\$735,300.77	74.74

In re Rates—Transportation of Passengers Between Points in New Jersey.

Most of the accounts in Maintenance of Equipment readily divide themselves between freight service and passenger service.

25—*Steam Locomotives—Repairs.*

From the statement filed in the record, the following units were derived:

Repairs per freight service locomotive mile:

$$\frac{\$65,867.31}{\$773,598} = 8.5114c.$$

Repairs per passenger service locomotive miles:

$$\frac{\$222,258.46}{\$3,155,137} = 7.0443c.$$

$$\text{Ratio: } \frac{8.5114c.}{7.0443c.} = 1.21$$

<i>Locomotive Miles.</i>	<i>Total.</i>	<i>Freight.</i>		<i>Passenger.</i>	
		<i>Amount.</i>	<i>%</i>	<i>Amount.</i>	<i>%</i>
Freight	512,428	512,428	.....	.....	.....
Passenger	3,097,762	.....	.....	3,097,762	.....
Mixed	32,799	24,599	75.00	8,200	25.00
Special	4,984	1,433	.....	3,551	.....
*Switching	280,762	235,138	83.75	45,624	16.25
Total	3,928,735	773,598	19.69	3,155,137	80.31

From the studies made for the Mountain Ice Case the ratio between repairs per mile for freight service locomotives (including switching), and repairs per mile for passenger service locomotives, was found to be 1.22 which is to be compared to 1.21 found above. This substantial agreement tends to show the reasonableness of the result stated in P.R.R.-11-R.II. (See *Mountain Ice Co. v. D., L. & W. R. R. Co.*, Vol. IV., N. J. P. U. C. R. 176.)

Other Maintenance of Equipment Accounts.

There can be no question as to the separation between service of repairs to passenger cars, freight cars and electric equipment of cars.

*Calendar year 1914 figures were divided on percentage for the year ended June 30th, 1915.

In re Rates—Transportation of Passengers Between Points in New Jersey.

Floating equipment has been largely charged to freight and work equipment has apparently been divided on the revenue train-mile basis. This is substantially the result which would be obtained by applying the percentages of Maintenance of Way and Structures to work equipment repairs.

Account 46—Shop Machinery and Tools.

This account was obviously in error. The passenger amount as set out in the exhibit was greater than the total stated in the annual report. A direct credit to the account from freight service is unlikely. No explanation of this discrepancy was to be found in the record.

Account 47—Power Plant Equipment—Repairs and its accompanying depreciation account were divided about 10% freight and 90% passenger. As mentioned under Maintenance of Way and Structures, no reason appears why part of the repairs should have been charged to freight, while the expenses of operation were all charged to passenger. (See Account 86, Operating Power Plant.)

Account 51—Maintenance of Joint Equipment at Terminals must have been divided on a basis quite different from any basis previously used, but its nature was not disclosed. On account of the ease with which this account could be divided in accordance with the facts, it is not unreasonable to assume that this was done.

Traffic Expenses.

Each of the accounts under the general head of Traffic Expenses (except Industrial and Immigration Bureaus) was divided in the accounting between freight service and passenger service, and the results of this division reported in the Annual Report. The amounts found in this manner were not used in Exhibit P.R.R.-11-R.H., but other amounts assigning less to passenger train service were there set up. No reason for the discrepancy appears. The fact that the difference is against the carrier has no bearing unless the reason for the change is made known, and the basis of the former division stated. The separation made in the exhibit was used in this report. Primary accounts from the annual report, and passenger train amounts from the exhibit, were as follows:

In re Rates—Transportation of Passengers Between Points in New Jersey.

	Total.	Freight.		Passenger.	
		Amount.	%	Amount.	%
53. Superintendence	\$40,723.57	\$18,336.27	45.03	\$22,387.30	54.97
54. Outside agencies	52,189.88	5,349.81	10.25	46,840.07	80.75
55. Advertising	30,503.06	633.41	2.08	29,869.65	97.92
56. Traffic associations	2,014.33	637.35	31.64	1,376.98	68.36
57. Fast freight lines	377.85	377.85	100.00	.....	.....
58. Indust. and Im. bureau	996.94	196.87	19.75	800.07	80.25
59. Stationery and printing	18,906.18	9,972.78	52.75	8,932.40	47.25
Insurance	17.18	0.93	5.41	16.25	94.59
60. Other expenses	104.64	1.30	1.24	103.34	98.76
Total traffic	\$145,832.63	\$35,506.57	24.35	\$110,326.06	75.65

In re Rates—Transportation of Passengers Between Points in New Jersey.

Transportation Expenses.

The separation by primary accounts, compiled from the Annual Report and from Exhibit P.R.R.-11-R.H., was as shown by the following:

	<i>Total.</i>	<i>Freight.</i>		<i>Passenger.</i>	
		<i>Amount.</i>	%	<i>Amount.</i>	%
61. Superintendence	\$72,280.91	\$18,984.01	26.26	\$53,296.90	73.74
62. Dispatching trains	72,371.97	11,095.73	15.33	61,276.24	84.67
63. Station employees	349,208.24	214,761.18	61.50	134,447.06	38.50
64. Weighing and car service	783.18	783.18	100.00	.....	.....
66. Station supplies and expenses	52,413.55	24,063.29	45.91	28,350.26	54.09
67. Yardmasters and clerks	3,750.90	671.64	17.91	3,079.26	82.09
68. Yard conductors and brakemen	38,850.86	34,443.35	88.66	4,407.51	11.34
69. Yard switching and signal tenders	11,672.84	2,036.95	17.45	9,635.89	82.55
70. Yard supplies and expenses	1,604.98	524.47	32.68	1,080.51	67.32
71. Yard engineers	21,366.70	18,466.95	86.43	2,899.75	13.57
72. Engine house expenses (yard)	4,324.14	4,047.11	93.59	277.03	6.41
73. Fuel for yard locomotives	36,543.17	32,881.82	89.98	3,661.35	10.02
74. Water for yard locomotives	1,227.64	1,165.17	94.91	62.47	5.09
75. Lubricants for yard locomotives	431.73	378.01	87.56	53.72	12.44
76. Other supplies for yard locomotives	446.64	393.48	88.10	53.16	11.90
77-78. Operating joint yards and terminal, balance ..	340,271.32	233,802.24	68.71	106,469.08	31.29
79. Motormen (yards)	1,168.30	.....	.....	1,168.30	100.00
79. Motormen (road)	39,834.48	.....	.....	39,834.48	100.00
80. Road engineers	232,915.48	72,611.66	31.18	160,303.82	68.82
81. Engine house expenses (road)	48,091.31	10,145.81	21.10	37,945.50	78.90
82. Fuel for road locomotives	416,441.88	137,208.74	32.95	279,233.14	67.05
83. Water for road locomotives	21,339.83	5,726.67	26.84	15,613.16	73.16
84. Lubricants—Road locomotives	5,886.02	1,430.73	24.31	4,455.29	75.69
85. Other supplies for road locomotives	6,710.31	1,758.84	26.21	4,951.47	73.79
86. Operating power plants	110,331.04	.....	.....	110,331.04	100.00

In re Rates—Transportation of Passengers Between Points in New Jersey.

	Total.	Freight.		Passenger.	
		Amount.	%	Amount.	%
87. Purchased power	\$14,930.54	.....	.....	\$14,930.54	100.00
88. Road trainmen	386,001.62	.....	28.15	262,979.58	71.85
89. Road train supplies and expenses	126,394.70	8,711.82	6.80	117,682.88	93.11
90. Interlockers, block and other signals	63,515.57	9,124.11	14.37	54,391.46	85.63
91. Crossing flagmen and gatemen	95,906.44	16,034.68	16.72	79,871.76	83.28
92. Drawbridge operation	10,458.77	2,005.44	19.75	8,383.33	80.25
93. Clearing wrecks	4,347.12	1,705.24	39.23	2,641.88	60.77
94. Telegraph and telephone operation	24,455.96	3,411.31	13.95	21,044.65	86.05
95. Operating floating equipment (fuel)	50,544.05	48,100.86	95.18	2,434.19	4.82
96. Stationery and printing	40,675.66	19,156.46	47.10	21,519.20	52.90
97. Insurance	53,459.18	17,282.27	32.33	36,176.91	67.67
98. Other expenses	1,509.69	381.51	25.27	1,128.18	74.73
99. Loss and damage—Freight	21,120.08	21,120.08	100.00	.....	.....
100. Loss and damage—Baggage	695.27	70	.....	604.57	100.00
101. Damage to property	4,078.11	1,359.29	33.33	2,718.82	66.67
102. Damage to stock on right of way	2,049.90	446.56	21.78	1,603.34	78.22
103. Injuries to persons	36,608.00	5,721.43	15.60	30,947.17	84.40
104-105. Operating joint tracks and facilities, balance	22,901.81	21,151.23	91.99	1,840.58	8.01
Total transportation	\$2,830,080.49	\$1,106,195.06	39.09	\$1,723,894.43	60.91

In re Rates—Transportation of Passengers Between Points in New Jersey.

62—Dispatching Trains.

This account was divided on approximately the revenue train-mile basis. Said basis was given on page 7 of the Exhibit P.R.R.-11-R.H. as 85.15% passenger, while the statement of the passenger part of this account gave 84.67% passenger. When special trains are included and when mixed trains are divided three-fourths freight and one-fourth passenger the revenue train-mile basis computed from the annual report becomes 85.24% passenger.

63—Station Employees.

There was a serious discrepancy between the amount given as passenger station employees in Exhibit P.R.R.-11-R.H. and that amount reported to the stockholders. The exhibit gave \$134,447.06 and the stockholders' report gave \$174,497.51. The larger amount is half of the total account. The smaller amount is 38.50% of the total account and was clearly a more reasonable figure, and is the one here adopted. In absence of a statement showing how the common items were divided no clear opinion can be formed.

64—Weighing and Car Service.

This is properly charged to freight.

66—Station Supplies and Expenses.

This is charged 45.91% freight and 54.09% passenger. It would appear reasonable that station supplies and expenses should follow the distribution of station employees unless a minute separation is made in the accounting. A charge to passenger train service in this account which is greater in proportion than the corresponding charge for station employees by about 40% was unexpected.

67-78—Yard Operating Accounts.

These accounts are closely related and must be divided on uniform bases. They have been considered together. A statement of these accounts was sufficient to exhibit grave inconsistencies in the method of division between services.

In re Rates—Transportation of Passengers Between Points in New Jersey.

Item.	Total.	Freight.		Passenger.	
		Amount.	%	Amount.	%
67. Yardmasters, etc.	\$3,750.90	\$671.64	17.91	\$3,079.26	82.09
68. Yard conductors and brakemen	38,850.86	34,443.35	88.66	4,407.51	11.34
69. Yard switch and signal tenders.....	11,672.84	2,036.95	17.45	9,635.89	82.55
70. Yard supplies and expenses.....	1,604.98	524.47	32.68	1,080.51	67.32
71. Yard engine men	21,366.70	18,466.95	86.43	2,899.75	13.57
72. Engine house expenses.....	4,324.14	4,047.11	93.59	277.03	6.41
73. Fuel for yard locomotives.....	36,543.17	32,881.82	89.98	3,661.35	10.02
74. Water for yard locomotives.....	1,227.64	1,165.17	94.91	62.47	5.09
75. Lubricants for yard locomotives.....	431.73	378.01	87.56	53.72	12.44
76. Other supplies for yard locomotives.....	446.64	393.48	88.10	53.16	11.90
Totals	\$120,219.60	\$95,008.95	79.03	\$25,210.65	20.97

In re Rates—Transportation of Passengers Between Points in New Jersey.

Passenger amounts were taken from Exhibit P.R.R.-11-R.H., totals from the annual report for the calendar year, and freight amounts are differences. Percentages were computed from these figures.

Accounts 67, 69 and 70 were divided on bases quite different from those applied to the other accounts.

The inconsistency of charging 88.66% of yard conductors and brakemen to freight and at the same time charging to freight but 17.91% of the yardmasters who oversee these conductors and brakemen is at once apparent.

For the year ended June 30th, 1915, the yard switching locomotive miles were stated as follows in the report to the Interstate Commerce Commission:

Freight	168,257	83.75%
Passenger	32,658	16.25%
	<hr/>	
	200,915	100.00%

Since yard switching in the two services was done by similar locomotives, a method which does not yield approximately similar total costs per mile is open to serious criticism.

Accounts 77 and 78 are the joint yard operating accounts and might or might not follow the division of Accounts 67 to 76, inclusive. In the case of the West Jersey and Seashore the joint yard account was nearly three times the size of the total of Accounts 67 to 76, inclusive. Here the method of division becomes of greater importance for this reason. The debit balance of the passenger part of Accounts 77 and 78 was \$106,469.08, or 31.29% of the total freight and passenger.

The difference between the passenger percentages for the yard operating accounts and for the joint yard accounts probably lies in the joint passenger terminal at Camden.

The joint accounts should, however, be considered in connection with the yard operating accounts.

In re Rates—Transportation of Passengers Between Points in New Jersey.

	<i>Total.</i>	<i>Freight.</i>		<i>Passenger.</i>	
		<i>Amount.</i>	<i>%</i>	<i>Amount.</i>	<i>%</i>
Accounts 67-76 inclusive, \$120,219.60		\$95,008.95	79.03	\$25,210.65	20.97
Accounts 77-78, Dr. Bal., 340,271.32		233,802.24	68.71	106,469.08	31.29
Total yard operating accounts, including joint accounts	\$460,490.92	\$328,811.19	71.40	\$131,679.73	28.60

Here we see 28.60% of the total yard switching accounts (67 to 78, inclusive) charged to passenger, while 16.25% of the yard switching locomotive miles are passenger. If there were no obvious inconsistencies in the division of Accounts 67, 69 and 70, the above relation would cast doubt on the accuracy of the separations. The total passenger part of Accounts 67 to 78, inclusive, was \$131,679.73, or 7.6% of the total passenger operating expenses. While such a switching cost is possible, it is high in proportion to general averages for all roads.

The effect of these inconsistencies on the total expenses charged to passenger train service has been considered. If the whole amount of Accounts 67 to 78, inclusive (\$460,490.92), had been divided between services on the switching locomotive mile basis the passenger amount would have been \$74,829.77 (16.25% of \$460,490.92). The amount charged in the exhibit was \$131,679.73.

Use of the locomotive mile basis would cause a reduction of \$56,849.96 or 3.30% of the total passenger train expenses. This reduction is doubtless somewhat too great, since locomotive mileage is not an absolute measure of the distribution of expenses between services but there can be no question that a reduction is necessary.

79--*Motormen.*

This account was all properly charged to passenger.

80--*Road Enginemen.*

This account was divided between services in accordance with the facts. Figures in the exhibits checked those in the annual report.

 In re Rates—Transportation of Passengers Between Points in New Jersey.

Freight road enginemen per locomotive mile $\frac{72,611.66}{538,460.00} = 13.49c.$

Passenger road enginemen per locomotive mile $\frac{160,303.82}{3,109,513.00} = 5.16c.$

But since the 3,109,513 train miles include electric trains, the pay of road motormen must be added.

\$160,303.82
 39,834.48 (account 79)

\$200,138.30 divided by 3,109,513 train miles = 6.44c.

These costs per locomotive mile are comparable with results on other roads.

Road Locomotive Miles (excluding switching).

	Total.	Freight.		Passenger.	
		Amount.	%	Amount.	%
Freight	512,428	512,428	.....	.....	.....
Passenger	3,007,762	.....	.....	3,007,762	.....
Mixed	32,799	24,599	75.00	8,200	25.00
Special	4,984	1,433	28.75	3,551	71.25
	<u>3,647,973</u>	<u>538,460</u>	<u>14.76</u>	<u>3,109,513</u>	<u>85.24</u>

81—Enginehouse Expenses—Road.

The division of this account charged a smaller enginehouse cost per locomotive mile to passenger locomotives than to freight locomotives.

82—Fuel for Road Locomotives.

On page 115 of the Annual Report to the Board for 1914 fuel consumption by classes of service was shown. The following statement was derived from that page and shows the practical reasonableness of the separation reported in Exhibit P.R.R.-11-R.H.

In re Rates—Transportation of Passengers Between Points in New Jersey.

FUEL CONSUMPTION ON THE WEST JERSEY AND SEASHORE.

Year Ended June 30th, 1914.

SERVICE.	Tons Con- sumed.	Aver- age Price Per Ton.	Cost of Fuel Consumed.			
			Freight.	%	Passenger.	%
Freight	50,649	\$2.82	\$142,830	.....	.....	.....
Passenger steam	100,511	2.82	.....	.....	\$283,441	.....
Passenger electric	37,093	2.34	.....	.....	86,798	.....
Mixed	1,685	2.82	3,564	75.00	1,188	25.00
Special	333	2.82	270	28.75	669	71.25
Total .....	.....	.....	\$146,664	28.27	\$372,096	71.73

*Account 86—Operating Power Plants.**Account 87—Purchased Power.*

Both accounts were properly charged to passenger.

Account 88—Road Trainmen.

This account was divided between services in the accounting. The items in Exhibit P.R.R.-11-R.H. check those in the annual report.

Road trainmen per train mile.	Freight	$\frac{\$103,022.04}{522,999.00} = 19.70c.$
	Passenger	$\frac{\$262,979.58}{3,020,128} = 8.71c.$

Account 89—Train Supplies and Expenses.

The following units were derived from the exhibit:

Train supplies and expenses per freight train mile	$\frac{\$3,711.82}{522,999} = 1.666c.$
--	--

Train supplies and expenses per passenger train mile	$\frac{\$117,682.88}{3,020,128} = 3.897c.$
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 In re Rates—Transportation of Passengers Between Points in New Jersey.

100—Loss and Damage—Baggage.

The total in Exhibit P.R.R.-11-R.H. does not check the annual report.

Exhibit P.R.R.-11-R.H.	\$694.57
Annual report	695.27

There was no reason for comment on the remaining separations. The results were reasonable and are perhaps as accurate as they can be made.

General Expenses.

The separation by primary accounts, compiled in the manner previously described, was as shown by the following. The passenger part of these accounts seemed high in proportion to the other general accounts.

In re Rates—Transportation of Passengers Between Points in New Jersey.

	Total.	Freight.		Passenger.	
		Amount.	%	Amount.	%
106. Salaries and expenses of general office.....	\$10,612.76	\$2,108.29	19.87	\$8,504.47	80.13
107. Salaries and expenses of clerks and attaches....	85,307.65	21,908.28	25.68	63,399.37	74.32
108. General office supplies and expenses.....	6,749.95	1,610.52	23.86	5,139.43	76.14
109. Law expenses	13,993.86	2,593.65	18.53	11,400.21	81.47
110. Insurance	57.20	10.71	18.72	46.49	81.28
111. Relief department expenses.....	6,844.60	1,165.53	17.03	5,679.07	82.97
112. Pensions	24,989.60	6,537.69	26.16	18,451.91	73.84
113. Stationery and printing.....	6,912.09	1,948.82	28.19	4,963.27	71.81
113½. Valuation expenses	2,219.86	426.29	19.20	1,793.57	80.80
114. Other expenses	1,762.12	776.93	44.09	985.19	55.91
115. Gen. administration joint tracks and yards, Dr.,	1,702.01	1,373.14	80.68	328.87	19.32
Total general expenses	\$161,151.70	\$40,459.85	25.11	\$120,691.85	74.89

In re Rates—Transportation of Passengers Between Points in New Jersey.

The total freight part of Accounts 1 to 105 inclusive is 67.64 per cent. of the total freight and passenger amount of these accounts. The carrier's exhibit charged \$120,691.85, or 74.89 per cent. of general expenses to passenger train service. Doubtless a large part of these charges was allocated in the accounting, and it seems evident that the revenue train-mile basis was applied to the remainder. If the percentages of Accounts 1 to 105, inclusive, had been used for the separation of this account, the passenger amount would have been about \$30,000 smaller.

Summary of Changes Suggested in Division of Operating Expenses Between Freight Service and Passenger Service.

	<i>Passenger Train Operating Expenses.</i>
Reduction of passenger switching accounts.....	\$56,850
Reduction of general expenses.....	30,662
Total reductions	\$87,512
Increase in Accounts 15, 15A and 16A.....	6,388
Increase in power plant equipment repairs and depreciation (Account 47)	6,252
Total increase	\$12,640
Net decrease	\$74,872

The net decrease is slightly over 2% of the total passenger train operating expenses. There was no basis except presumption for the reduction in General Expenses (Accounts 106-116) and it seems probable that the switching reduction was large. Probably a reduction of \$45,000 in the switching accounts would have been more equitable.

The carrier has not made an adjustment of passenger expenses to care for the excess of company service done by freight trains for passenger service over that done by passenger trains for the freight service. In the Arkansas Rate case this adjustment was 1.87% of the freight operating expenses but the road analyzed in that case (The St. Louis and San Francisco) had more than double the freight traffic in proportion to the total traffic that the West Jersey and Seashore enjoyed. The Railroad Commission of Wisconsin used one and one-half per cent. of the total operating

In re Rates—Transportation of Passengers Between Points in New Jersey.

expenses, which would be \$77,663. On the whole, it seems probable that no injury would be done either party to the case in accepting for purposes of this report the separation as reported by the carrier. The injustice would work against the carrier in any event. No complaint can issue from them as to results arrived at by use of their reported figures.

Depreciation.

Throughout the accounts, amounts of depreciation which appeared large in proportion to the amounts for repairs, were charged to operating expenses for electrical equipment, power plants, transmission and distribution systems and all electrical apparatus. This suggested the following investigation of depreciation charges. Total depreciation charges of all kinds in 1914 were \$310,765 or 6.00 per cent. of the operating expenses. In Exhibit P.R.R.-5-R.H., the West Jersey and Seashore set up a valuation, exclusive of land, equipment and materials and supplies on hand, showing by items:

1. Inventory as of January 1st, 1911.
2. Additions and Betterments 1911 to 1914, inc.
3. Additions and Betterments during 1915 to August 31st, 1915.
4. Total as of August 31st, 1915.

Item "18—Electric Light Plants" was given as \$1,127,816, and item "19—Electric Power Transmission and Electric Power Substations" was given as \$57,960. No value was given in this exhibit for Electric Equipment of cars and the value of transmission systems is obviously incomplete. No separate value was given for Power Plant Equipment. Exhibit P.R.R.-5-R.H. was not a satisfactory statement. Values were, therefore, taken from Exhibit P.R.R.-37 which gave in parallel columns the valuations, the average rate of depreciation and the amount of depreciation per annum for the year ended December 31st, 1914. Slight discrepancies were found between Exhibit P.R.R.-5-R.H. and Exhibit P.R.R.-37, but since the two statements were for different dates, the discrepancies were ignored. Amounts of depreciation were checked against the annual report and found correct.

Exhibit P.R.R.-37 reads as follows:

In re Rates—Transportation of Passengers Between Points in New Jersey.

WEST JERSEY AND SEASHORE RAILROAD COMPANY. EXHIBIT
P.R.R.-37.

ELECTRICAL PORTION OF ROAD UPON WHICH DEPRECIATION IS CHARGED.

<i>PROPERTY.</i>	<i>Valuation.</i>	<i>Average Rate of Depreciation.</i>	<i>Amount of Depreciation per annum.</i>
Westville power station:			
Building	\$229,597	2.00%	\$4,592
Machinery	482,102	6.50%	31,337
Sub stations:			
Buildings	64,952	2.00%	1,299
Machinery	367,778	6.35%	23,354
High tension line.....	199,595	3.57%	7,126
Signal line	33,443	2.44%	816
Third rail (including bonding).....	699,420	4.24%	29,655
Passenger cars	914,206	5.78%	52,841
Electric equipment of cars.....	583,730	6.34%	37,008
Trolley construction (excluding New- field to Millville).....	26,642	6.05%	1,612
Total	\$3,601,465	5.26%	\$189,640

An inspection of this display shows no depreciation charges of an unusual or extraordinary nature. Items for "High Tension Line," "Third Rail" and "Trolley Construction" add to \$38,393 which is the amount of Account 15A, "Electric Power Transmission—Depreciation." Power Plant Equipment—Depreciation in Exhibit P.R.R.-37 checked the amount in the annual report for Account 47-A. Depreciation for Power Plant Buildings was included in Account 16-A. Depreciation on passenger cars was given as \$52,841 compared to \$86,845 depreciation on all passenger train equipment. Other depreciation charges not mentioned in Exhibit P.R.R.-37 but appearing in the operating expenses were: Steam Locomotives, \$61,041; Freight Train Cars, \$29,092; Floating Equipment, \$3,488 and Work Equipment \$2,017. Total depreciation charges for 1914 were \$319,282. Depreciation of ballast, ties, rails, stations, tools, etc., have been cared for through maintenance. Considering all these facts, the depreciation charges appear to be normal, and based upon average expected life consistent with usual practice.

In re Rates—Transportation of Passengers Between Points in New Jersey.

WEST JERSEY AND SEASHORE RAILROAD.

Year Ended December 31st, 1914.

	<i>Total.</i>	<i>Freight.</i>	<i>Passenger.</i>
Freight	\$1,809,412.97	\$1,809,412.97	\$4,116,508.55
Passenger	4,116,508.55	.....	39,224.30
Mail	39,224.30	.....	188,853.43
Express	188,853.43	.....	8,489.22
Excess baggage	8,489.22	.....	19,309.71
Other passenger train.....	19,309.71	.....	87,475.55
Milk	87,475.55	.....	.....
Switching	1,979.84	1,979.84	175.00
Special service train.....	3,102.87	2,927.87	.....
Other freight train.....	57.52	57.52	48,336.44
Water transfers—Passenger	48,336.44	.....	.....
Water transfers—Vehicles	52,932.74	52,932.74	.....
Miscellaneous transportation	3,448.76	3,448.76	.....
Total transportation	\$6,379,131.90	\$1,870,759.70	\$4,508,372.20
Station train and boat privileges,	\$19,752.11	\$12.00	\$19,740.11
Parcel room	5,990.15	.....	5,990.15
Storage—Freight	1,542.97	1,542.97	.....
Storage—Baggage	1,928.15	.....	1,928.15
Demurrage	4,858.64	4,858.64	.....
Telegraph and telephone.....	11,166.81	5,583.41	5,583.40
Rents of buildings and other prop-	.....	.....	.....
erty	5,121.16	2,664.70	2,456.46
Miscellaneous	985.29	798.35	186.94
Joint facility credits.....	7,817.59	2,359.89	5,457.70
Total (except power).....	\$6,438,294.77	\$1,888,579.66	\$4,549,715.11
		(29.33%)	(70.67%)
Power	34,304.34		
Total railway operating revenue,	\$6,472,599.11		

Miscellaneous Operations.

These were excluded from the costs. Producing Power Sold is the only miscellaneous operation of the West Jersey and Seashore. Revenue from Power Sold was likewise excluded.

Taxes.

These were divided between freight service and passenger train service on page 51 of P.R.R.-11-R.H. The result of this division

In re Rates—Transportation of Passengers Between Points in New Jersey.

was to charge to passenger train service \$243,094.74, or 72.97% of the total of \$333,144.04 taxes paid. The total operating expenses were found to be 67.87 per cent. passenger train. Taxes on property used in both services were divided on train miles for equipment and on the basis of the investment in each service for main stem, second class property and franchises. The property investment for each service was obtained, apparently, by applying train mile percentages to values used in both services. Taxes on rolling stock were the actual amounts paid. This division is probably as accurate as it can be made.

Hire of Equipment.

Actual amounts paid were used in the exhibits.

Joint Facility Rents.

Rents paid for strictly passenger facilities were charged directly. Rents for facilities used by both services were divided on the train mile basis.

Revenues.

The revenue statement filed by the carrier was not complete. The completed statement, showing all railway operating revenues, divided between freight service and passenger service, is shown on the following page. Freight amounts of revenue accounts common to both services were found by deducting from the total in the annual report the amount stated in the exhibit as the passenger train part. Revenue from the sale of produced power sold is included here for completeness, but no conclusions as to net revenue were made using this revenue.

Summary of Operating Expenses and Other Costs.

All of the figures previously analyzed have been brought together in the following manner. No explanation of this display is considered necessary.

In re Rates—Transportation of Passengers Between Points in New Jersey.

	Total.	Freight.		Passenger.	
		Amount.	%	Amount.	%
Maintenance of way.....	\$1,039,588.44	\$227,339.44	21.87	\$812,249.00	78.13
Maintenance of equipment.....	983,816.63	248,515.86	25.26	735,300.77	74.74
Traffic expenses	145,832.63	35,506.57	24.35	110,326.06	75.65
Transportation expenses	2,830,089.49	1,104,195.06	39.09	1,723,894.43	60.91
General expenses	161,151.70	40,459.85	25.11	120,691.85	74.89
Total above	\$5,160,478.89	\$1,658,016.78	32.13	\$3,502,462.11	67.87
Miscellaneous operations (producing power sold)....	17,083.35				
Total operating expenses.....	\$5,177,562.24				
Taxes	\$333,144.04	\$90,049.30	27.03	\$243,094.74	72.97
Hire of equipment.....	64,290.18	54,255.17	84.39	10,035.01	15.61
Joint facility rents.....	182,261.66	138,755.62	76.13	43,506.04	23.87
Total (except miscellaneous operations).....	\$5,740,174.77	\$1,941,076.87	33.82	\$3,799,097.90	66.18
Total (including miscellaneous operations).....	5,757,258.12				
Revenues (except power).....	\$6,438,294.77	\$1,888,570.66	29.33	\$4,549,716.11	70.67
Revenues (power)	34,304.34				
Total revenues	\$6,472,599.11				
Excess of revenues over total costs (excluding power),	\$698,120.00	Deficit			
Excess of revenues over total costs (including power),	715,340.99	\$52,497.21	.....	\$750,617.21	.....

In re Rates—Transportation of Passengers Between Points in New Jersey.

Operating Ratios.

Operating ratio is the ratio of operating expenses to operating revenues. Dividing operating expenses (excluding miscellaneous operations) by the revenues (except power revenue) the West Jersey and Seashore operating ratio for the year ended December 31st, 1914, was found to be 80.15%. Including miscellaneous operations and the revenue from produced power sold the ratio was 79.99%.

Both revenues and expenses have been divided between freight service and passenger train service. From the operating ratios in the two services it was possible to obtain the relative earning power in these services. Freight operating ratio was found to be 87.79%, using the figures placed in the record, and the passenger train operating ratio was found to be 76.98 per cent.

	<i>Total.</i>	<i>Freight.</i>	<i>Passenger.</i>
Operating revenues	\$6,438,295	\$1,888,580	\$4,549,715
Operating expenses	5,160,479	1,658,017	3,502,462
Operating ratio (per cent.)	80.15	87.79	76.98

Separation of Passenger Train Expenses Between Strictly Passenger Expenses and the Expenses of Other Operations on Passenger Trains.

Consideration of the further division of passenger train expenses between strictly passenger service and other transportation on passenger trains followed the study of operating expenses and their division between freight service and passenger service. In this separation revenues and expenses of miscellaneous operations (Produced Power Sold) were excluded from the calculations. The totals will not check the income account but they will show the cost of passenger service more accurately than would be the case if miscellaneous operations were included.

Operating Expenses.

Except certain Traffic Expenses and "Loss and Damage—Baggage," all operating expenses were divided on the car mile basis.

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All Traffic Expenses and "Loss and Damage—Baggage," were charged to strictly passenger service. Since operations other than strictly passenger traffic on passenger trains consist of mail, express and milk, it is proper to charge Traffic Expenses to strictly passenger service. No soliciting is done for mail or express business.

The car mile basis charged 91.13 per cent. of passenger train expenses to strictly passenger service. In compiling this basis, combination cars were divided on the basis of length devoted to each service. The manner of dividing certain cars which were used for baggage, mail and express but contained no partitions or other divisions of the car, was not explained on the record. The period covered by the study was not stated. Computations which appear below point to the probable reasonableness of the results reached using car miles for division of costs. This basis understates cost of strictly passenger service if it is in error at all.

Taxes, Hire of Equipment and Joint Facility Rents.

These costs were also divided between strictly passenger service and other passenger train services on the car mile basis, 91.13 per cent. strictly passenger.

Revenues.

The division of revenues furnished in the exhibit was not complete. Details for mail, express, milk and other revenues were taken from the annual report, and a complete statement prepared. From the partial statement, no comparisons of the revenues and expenses of passenger train services were possible. Passenger train totals were taken from the division of revenues between freight service and passenger train service above. The separations of incidental revenues were accepted as stated in Exhibit P.R.R.-11-R.H. Strictly passenger revenues were found to be 92.77 per cent. of the total passenger train revenues, contrasted with 91.13 per cent. of the car miles. The complete statement follows:

In re Rates—Transportation of Passengers Between Points in New Jersey.

WEST JERSEY AND SEASHORE RAILROAD, 1914.

PASSENGER TRAIN REVENUES.

ITEM.	Passenger Train Part of the Total.	Strictly Passen- ger Part of Pas- senger Train.
Passenger	\$4,116,508.55	\$4,116,508.55
Mail	39,224.30	.....
Express	188,853.43	.....
Excess baggage	8,489.22	8,489.22
Other passenger train.....	19,309.71	6,382.51
Milk	87,475.55	.....
Special service	175.00	175.00
Water transfers—Passenger	48,336.44	48,336.44
Total transportation	\$4,508,372.20	\$4,179,891.72
Station, train and boat privilege.....	\$19,740.11	\$19,740.11
Parcel room	5,990.15	5,990.15
Storage—Baggage	1,928.15	1,928.15
Telegraph and telephone.....	5,583.40	5,164.09
Rents of buildings	2,456.46	2,238.57
Miscellaneous revenue	186.94	186.94
Joint facility rent credit.....	5,457.70	5,457.70
Total of above.....	\$4,549,715.11	\$4,220,597.43

Operating Ratio and Other Comparisons.

Operating Revenues and Operating Expenses were taken from the separations above. Operating ratio is the ratio in per cent. which operating expenses bear to operating revenues.

	Passenger Train.	Strictly Passenger.	Other Pas- senger Train.
Operating revenues	\$4,549,715.11	\$4,220,597.43	\$329,117.68
Operating expenses	3,502,462.11	3,199,655.50	302,806.61
Net revenue	\$1,047,253.00	\$1,020,941.93	\$26,311.07
Operating ratio	76.98%	75.81%	92.01%
Taxes	\$243,094.74	\$221,532.24	\$21,562.50
Operating ratio (including taxes),	82.33%	81.06%	98.56%
Hire of equipment.....	10,035.01	9,144.90	890.11
Joint facility rents.....	43,506.04	39,647.05	3,858.99
Total costs	\$3,799,097.90	\$3,469,979.69	\$329,118.21
Ratio of total costs to revenue..	83.56%	82.22%	100 %

 In re Rates—Transportation of Passengers Between Points in New Jersey.

Mail contracts cover long periods of time, and the compensation is fixed by the Post Office Department of the Government. Express rates are fixed by the Interstate Commerce Commission as to interstate rates, and the same scale is applied in intra-state New Jersey traffic. It must be presumed that these branches of passenger train service are somewhat remunerative. The above figures seem to show a very small margin of profit on "other passenger train" business.

Passenger train car miles (including car miles in special trains) were taken from the annual report for 1914.

Passenger	10,417,360
Sleeping, parlor and observation.....	1,287,854
Other passenger train cars.....	1,498,526
Total	13,203,740

All passenger car miles and all sleeping, parlor and observation car miles were strictly passenger. These were 11,705,214, or 88.65 per cent. of the total. The figure given in Exhibit P.R.R.-11-R.H. for "percentage car miles in strictly passenger service bear to total passenger train car miles (year 1914)" was 91.13 per cent. Applying this percentage to 13,203,740, the result was 12,032,568. This would make 327,354, or 21.85 per cent. of the total as the passenger and baggage part of "other passenger train car miles."

$$(12,032,568 - 11,705,214 = 327,354; 327,354/1,498,526 = 21.85\%)$$

	\$4,220,597	
Revenue per car mile in strictly passenger service	<u>12,032,568</u>	= 35.1c.

	\$329,118	
Revenue per car mile in other passenger train service	<u>1,171,172</u>	= 28.0c.

Operating Expenses per car mile were, of course, the same in all services for the reason that the car mile basis was used to divide total passenger train expenses between services.

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Operating expenses per passenger train car mile (excluding taxes)

$$\frac{\$3,502,462}{13,203,740} = 26.5c.$$

$$\text{Taxes per passenger train car mile } \frac{\$243,095}{13,203,740} = 1.84c.$$

Division of Strictly Passenger Expenses and Revenues Between Intrastate New Jersey Traffic and Interstate Traffic Within New Jersey.

Revenues were considered first. As above stated, for the purpose of saving labor the carrier used a period of two months as a basis for dividing the year's revenues. These two months were February and August, 1914, and gave the following results:

(Exhibit P.R.R.-11-R.H.)—

Strictly passenger revenue intrastate in New Jersey.....	\$204,159.83
Strictly passenger revenue interstate in New Jersey.....	724,821.98
	<hr/>
	\$928,980.81

The strictly passenger revenue for the whole year was \$4,116,508.55. The two months selected were thought by the carrier to be representative. (Record, page 127, Mr. Fell: "Those months in percentage of time represent 16.16 per cent. of the total whereas the revenue which we actually analyzed represented 18.51 per cent. of the year.") But two months furnish 22.57 per cent. of

the revenue. (The witness was in error $\frac{\$928,981}{4,116,509} = 22.57\%$.)

The period cannot be said to be wholly representative. The revenues per month are 35% greater for these two months than the average for the year. It is true that the division between intrastate and interstate for these two months might be representative for the year. An increase in intrastate percentage of the total revenue would be followed by a corresponding increase in the number of passengers and passenger miles. Since expenses were divided on the basis of number of passengers and passenger miles there would be an increase in the costs and the relative profitability would not be changed materially.

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Operating expenses have been divided by the carrier between intrastate and interstate upon two basis. A third factor used was a combination of these two. Such a division in effect divides the expenses into two groups; one group (the terminal expenses) being independent of the distance passengers are hauled, and the other group (movement expenses) varying more or less directly with the length of the journey. The number of passengers was used as the basis for dividing the first group and the number of passenger miles was used for the second. The theory of this separation is the best that can be made in such a case. The results derived were as follows:

(See page 50 of P.R.R.-11-R.H. Exhibit.)

	<i>Total Strictly Passenger Expenses.</i>	<i>Intrastate N. J.</i>		<i>Interstate N. J.</i>	
		<i>Amount.</i>	<i>%</i>	<i>Amount.</i>	<i>%</i>
Maintenance of way and structure	\$740,202.51	\$161,754.79	21.85	\$578,447.72	78.15
Maintenance of equipment	670,079.59	137,533.62	20.52	532,545.97	79.48
Traffic expenses	108,340.31	23,283.84	21.49	85,056.47	78.51
Transportation expenses	1,571,046.60	369,209.20	23.50	1,201,837.40	76.50
General expenses ...	109,986.49	32,506.68	29.56	77,479.81	70.44
Total operating expenses	\$3,199,655.50	\$724,288.13	22.64	\$2,475,367.37	77.36
Taxes	221,532.24	45,148.27	20.38	176,383.97	79.62

It appears here that the best use was not made of the theory. The total intrastate New Jersey operating expenses in the first four general groups were \$691,781.45 or 22.39 per cent. of the total. It would seem that general expenses, the fifth general group, should follow the division of the branches of operation over which these general officers have supervision, rather than the proportion assigned by the carrier to intrastate business. No reason can be offered for using passenger miles as a basis for the separation of the Pensions Account and the number of passengers as a basis for the separation of the salaries and expenses of general officers. Applying the 22.39 per cent. just derived to the total General Expenses of \$109,986.49 we get \$24,625.98 as the intrastate part

In re Rates—Transportation of Passengers Between Points in New Jersey.

instead of \$32,506.68 reported by the carrier. This is a reduction of \$7,880.70. The amount is somewhat over 1% of the total intrastate passenger expenses.

The passenger mile basis is an approximation for the reason that it was necessary to apportion the mileage of tickets reading "Philadelphia or Camden" and these are a large part of the total. The analysis was made for the two months of February and August, the period used for other studies. The passenger mileage

68,439,238

for these two months was $\frac{\text{68,439,238}}{290,662,459} = 23.55$ per cent. of the

total for the year. The division between intrastate and interstate could be representative, but it was not shown to be representative. Many approximations enter the division of strictly passenger service between intrastate and interstate traffic, but on the whole the study is probably the best that can be made without a prohibitive cost. Since all the rail mileage is within the state the costs would obviously be the same for both classes of traffic. The studies filed by the carrier show that this is the case.

Comparing revenues and expenses of interstate and intrastate passenger traffic the following results have been derived, using the modification of general expenses considered above. Interstate New Jersey passenger revenue and interstate New Jersey taxes stated below are the differences between the totals and the intrastate portions.

	<i>Total Strictly Passenger.</i>	<i>Intrastate New Jersey.</i>	<i>Interstate New Jersey.</i>
Operating revenues (intrastate total from page 48 of exhibit P.R.R.-11-R.H.)	\$4,220,597.43	\$919,732.13	\$3,300,865.30
Operating expenses, modified as explained above	3,199,655.50	716,407.43	2,483,248.07
Net revenue	1,020,941.93	203,324.70	817,617.23
Operating ratio (per cent.)	75.81	77.89	75.23
Taxes	221,532.24	45,148.27	176,383.97
Operating ratio including taxes (per cent.)	81.06	82.80	80.57
Hire of equipment	9,144.90	1,863.73	7,281.17
Joint facility rents	39,647.05	12,234.22	27,412.83
Total costs	3,469,979.69	775,653.65	2,694,326.04
Ratio of total costs to revenue	82.22%	84.33%	81.62%

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If the adjustment of \$7,880.70 had not been made to care for the apparent over-statement of intrastate general expenses (Accounts 106-116) the intrastate operating ratio (excluding taxes), would have been 78.75 per cent.

For convenient reference the operating ratios have been assembled and restated below.

WEST JERSEY AND SEASHORE RAILROAD—1914.

Operating ratios exclusive of taxes for different services.

Total—all operations	80.15%
Freight service	87.79%
Passenger service	76.98%
Other than strictly passenger.....	92.01%
Strictly passenger	75.81%
Intrastate New Jersey.....	77.89%
Interstate in New Jersey.....	75.23%

It will be observed that intrastate and interstate passenger service were about equally remunerative; that is, strictly passenger business was more profitable than mail, express and milk business; that passenger train traffic was more profitable than freight train traffic for the year ended December 31st, 1914. There have been advances in some of the passenger rates and freight rates since that time. Financial results of the year 1915 are discussed in another place. From the operating ratio of 87.79 per cent. freight, it seems that freight service needs additional revenues more than the passenger service. What effect recent freight advances will have is still problematical, but the small amount of freight service precludes the possibility of getting much additional revenue from this source.

Passenger operating ratios of 77 and 76 per cent. are high in themselves and tend to show insufficient revenues. Passenger service is relatively more profitable than freight service, but passenger service does not pay adequate return on the investment, as is shown in the discussion of valuation and rate of return below.

Valuation and Rate of Return.

The quantity of testimony introduced tending to show a value on the West Jersey and Seashore greater than the assessed valuation was many times greater than all other testimony combined.

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It has been impossible to go over the supporting figures in detail or to investigate the reasonableness of the carrier's contention for greater value. As a result of the showing the assessed valuation was about \$3,186,800 higher in 1915 than in 1914. (Testimony of Louis Focht on page 322 of the Record.)

Exhibit P.R.R.-16-R.H. is a volume of details of increases claimed by the West Jersey and Seashore over the state revaluation of 1911. No summary is shown in the volume, but Exhibit P.R.R.-5-R.H. summarizes both this and one other exhibit (P.R.R.-9-R.H.), showing in detail additions and betterments from 1896 to 1914. A discussion of Exhibit P.R.R.-5-R.H. appears below under Freight-Passenger separation. Exhibit P.R.R.-16-R.H. is supplemented by elaborate center line maps (Exhibits P.R.R.-17a-R.H. and P.R.R.-18a-R.H.) and by a volume of details of track cost (Exhibit P.R.R.-6-R.H.). Exhibit P.R.R.-16-R.H. and its summary Exhibit P.R.R.-5-R.H. gave no consideration to land and land values, but land was fully covered by exhibits showing the value of adjoining land in the cities of Atlantic City and Camden, and along the right of way between Atlantic City and Camden, together with similar figures for the branches. Other exhibits gave the application of the value of adjoining land to the land of the West Jersey and Seashore. These figures were all submitted to show a greater value than the assessed value, but no summary showing exactly the valuation which the West Jersey and Seashore desired to place on its property was discovered.

By assembling the details of the various exhibits it was possible to arrive at a total which can be presumed to be the valuation claimed by the West Jersey and Seashore. Consideration was first given to Exhibit P.R.R.-5-R.H.

The "Total Value of Tangible Property," main stem and second class, was stated at \$11,590,999. Increases on account of revision (P.R.R.-16-R.H.) total \$2,411,250. Additions and betterments are given for 1911 to 1914 inclusive as \$1,213,722, but the total of four years given in Exhibit P.R.R.-9-R.H. was \$940,214. Whether an inconsistency exists or different periods were included cannot be determined from anything in the exhibits. Adding additions and betterments from January 1st to August 31st, 1915 (\$248,487), to the amounts already

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quoted from Exhibit P.R.R.-5-R.H., we get the total value of tangible property, exclusive of land, equipment and materials and supplies on hand, as \$15,464,458. Overhead charges of \$3,630,280 were added, making a grand total of \$19,094,738. Including equipment at the assessed value of \$1,840,652 (Exhibit P.R.R.-10-R.H., page 3) and land at \$2,372,621 for the Atlantic City Division (covering cities of Camden and Atlantic City), as shown in Exhibit P.R.R.-17c-R.H., and at \$2,636,830 for the Cape May Division, as shown in Exhibit P.R.R.-18b-R.H., the grand total, excluding materials and supplies, becomes \$25,944,841. Certain depreciation must, of course, be deducted from this total. The Book Cost of Road and Equipment as of December 31st, 1914, was \$20,691,206, and the assessed value for 1914 was \$15,586,486. "Investment in Property" as of December 31st, 1914, was given on page 8 of Exhibit P.R.R.-11-R.H. as \$20,173,580. Clearly the increases in valuation urged by the West Jersey and Seashore contain elements of value not in the property. Perhaps the most conspicuous single objection is the inclusion of overhead items amounting to \$3,630,280, or 23.5 per cent. of the value of tangible property, exclusive of equipment, land and materials and supplies on hand. None of this can be allowed in absence of a showing that funds were dispersed. Contingencies of 5 per cent. on construction when the actual quantities are included in the inventory at the prices actually paid, cannot be admitted in a statement of value.

Serious objections arise concerning the land values on account of the uncertain data on which the calculations were based.

For purposes of this report it has seemed best to make two sets of calculations using the investment in property (\$20,173,580) as the maximum probable valuation and the assessed valuation (\$15,605,065) as the minimum probable valuation.

The use of the assessed valuation (\$15,605,065) will, it is believed, quite compensate for any allowance which might be properly made to affect expenditures for unprofitable and unusable property, such as the Westville Cut-off, and for the large investment made in the electrification of part of the property in 1907, and the consequent reduction in rate of return. This is claimed upon the assumption that the expenditure of between \$5,000,000 and \$6,000,000, representing approximately 25% of total invest-

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ment in all property, was not reasonably required and was too far in advance of needs. It seems undoubtedly true that the dual operation has resulted in greatly increased cost of operation. Without deciding the questions raised, it appears that the use of the assessed valuation will make due and reasonable allowance for all deductions desired.

Exhibit P.R.R.-2, filed at the original hearing, was a detailed statement of financial operations and statistics for the West Jersey and Seashore from 1900 to 1914, inclusive. This compilation comprised income accounts, profit and loss accounts, capital and debt and certain mileage and other statistics.

The following table was compiled from the exhibits and is self-explanatory:

YEAR ENDED JUNE 30TH.	Capital Stock.	Funded Debt.	Property Investment per Mile Owned.		Total Capital Obligations per Mile Owned, First Main Track.
			First Main Track.	All Main Tracks.	
1900	\$5,058,075	\$1,924,900	\$31,233	\$24,138	\$30,251
1901	5,057,955	4,986,800	31,336	24,218	30,439
1902	5,057,955	4,986,800	31,176	24,094	20,439
1903	5,058,045	4,986,800	36,253	27,933	30,531
1904	5,058,045	4,986,800	36,419	28,061	30,531
5-year average	5,058,015	4,974,420	33,239	25,689	30,401
1905	6,321,955	5,986,800	36,663	28,249	37,413
1906	9,746,353	5,961,800	36,673	28,230	47,457
1907	9,747,505	7,018,025	54,709	37,945	50,046
1908	9,746,855	6,960,000	61,004	42,128	49,575
1909	9,746,855	8,293,075	57,143	39,300	53,531
5-year average	9,061,905	6,843,940	49,308	35,493	47,622
1910	9,746,855	8,228,450	58,023	39,905	53,339
1911	9,747,305	8,159,245	58,900	40,427	53,136
1912	9,747,305	8,084,400	59,491	40,953	52,757
1913	9,747,305	8,000,375	59,503	40,840	52,664
1914	9,747,305	7,911,350	60,767	41,708	52,400
5-year average	9,747,215	8,076,800	59,372	40,750	52,890
15-year average	7,955,712	6,631,720	47,352	34,307	43,675

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It will be noted that the ratio of capital stock to total obligations has remained about constant for the period. Property investment per mile in 1900 was 103 per cent. of the total capital obligations. In 1914 it was 116 per cent., showing that additions and betterments had been made from earnings.

Property investment per mile for first main tracks was \$60,767 in 1914, which is greater than the assessed value for the same year by about \$14,000. In 1915 the property investment was about the same and the assessed value was \$55,760.

Rate of Return.

The following table is a further extract from exhibit P.R.R.-2. The results are shown graphically in the diagram following the table.

YEAR.	Rate of Return in Per cent. on		
	Property Investment.	Total Capital Obligations.	Capital Stock.
1900	7.96	8.40	12.03
1901	8.41	8.83	13.13
1902	8.24	8.63	12.74
1903	7.61	8.74	12.96
1904	7.04	7.72	10.93
5-year average	7.82	8.46	12.36
1905	8.52	8.32	12.40
1906	11.73	9.26	12.30
1907 (year of electrification)	3.37	3.46	3.12
1908	5.88	6.38	7.93
1909	5.99	6.00	7.81
5-year average	6.60	6.555	8.43
1910	5.23	5.73	7.09
1911	6.75	7.60	10.56
1912	5.02	5.39	7.22
1913	5.28	5.93	7.63
1914	4.37	4.94	5.81
5-year average	5.32	5.92	7.66
15-year average	6.34	6.73	8.95

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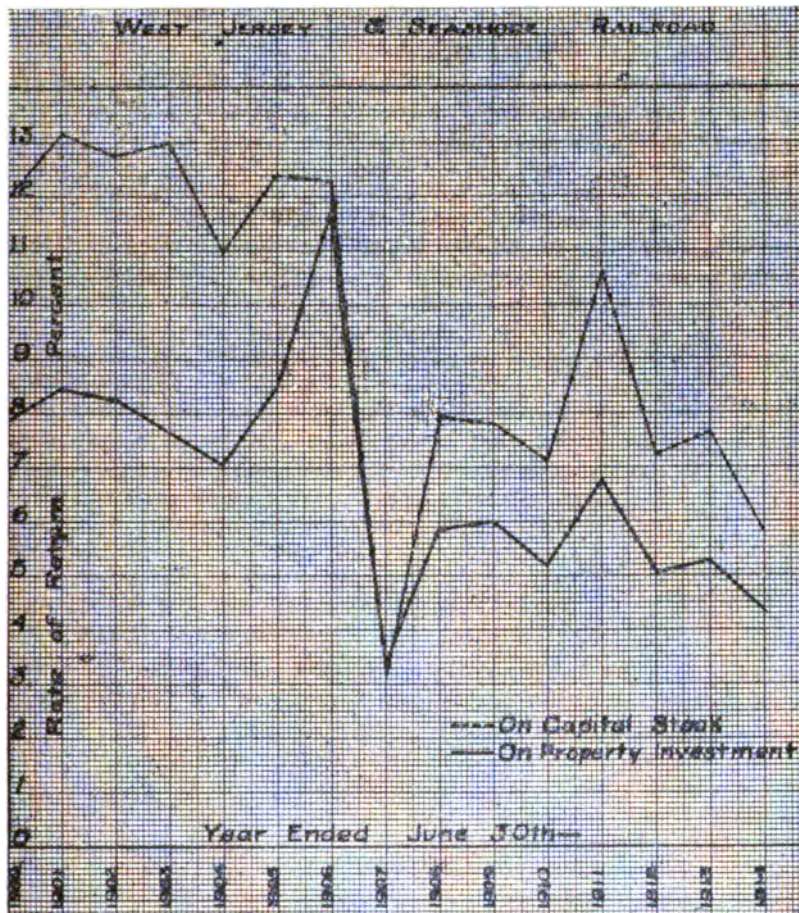
WEST JERSEY AND SEASHORE RAILROAD.				
Year.	Book Value Less Additions and Better- ments.	Progressive Additions and Betterments From Income.	Net Operating Income.	Net Operating Income Per Cent. of Prop- erty Investment Less Additions and Better- ments.
1900	\$10,306,889 246,283	\$246,283	\$820,641	8.2
Net	\$10,060,606			
1901	10,340,973 767,536	767,536	869,765	9.1
Net	9,573,437			
1902	10,288,073 1,150,440	1,150,440	847,755	9.3
Net	9,137,633			
1903	11,927,181 1,613,577	1,613,577	907,086	8.8
Net	10,313,604			
1904	11,981,841 1,928,477	1,928,477	843,099	8.4
Net	10,053,364			
1905	12,062,197 2,259,731	2,259,731	1,027,817	10.5
Net	9,802,466			
1906	12,138,920 2,804,721	2,804,721	1,423,514	15.3
Net	9,334,199			
1907	18,327,673	616,778	3.4
1908	20,558,303 2,807,371	2,807,371	1,209,768	6.8
Net	17,750,932			

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WEST JERSEY AND SEASHORE RAILROAD—Continued.

<i>Year.</i>	<i>Book Value Less Additions and Better- ments.</i>	<i>Progressive Additions and Betterments From Income.</i>	<i>Net Operating Income.</i>	<i>Net Operating Income Per Cent. of Prop- erty Investment Less Additions and Better- ments.</i>
1909	19,257,120 2,874,697	2,874,697	1,153,597	7.0
Net	16,382,423			
1910	19,553,659 3,162,344	3,162,344	1,029,265	6.3
Net	16,391,315			
1911	19,849,455 3,666,216	3,666,216	1,360,076	8.4
Net	16,183,239			
1912	20,107,933 3,679,048	3,679,048	1,024,091	6.2
Net	16,428,885			
1913	20,052,563 4,006,672	4,006,672	1,061,499	6.6
Net	16,045,891			
1914	20,478,611 4,130,420	4,130,420	895,407	5.5
Net	16,348,191			

In re Rates—Transportation of Passengers Between Points in New Jersey.



The carrier properly claims that this exhibit shows declining net returns from its operations. There can be no question as to this result. Whether the low point now reached is a danger mark or not, and whether the additional revenues accruing from advances in rates (both interstate and intrastate) effective since the period covered by this exhibit will sufficiently augment the present revenues of this carrier and show a better condition in the future, are questions concerning which nothing can be said at present. Doubtless a return of 4.37 per cent. on the property investment in 1914 is too low, but the investment used in computing this rate of return was \$20,478,611, as compared to the assessed value for 1914 of \$15,605,065.

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The rate of return on the assessed valuation for 1914 of \$15,-605,065 would be 5.7 per cent.

The Eastern Five Per Cent. case (I. & S. 333) allowed advances in freight rates and indirectly in passenger fares. The advanced passenger fares took effect during 1915 and the freight rates on February 25th, 1915. Hence the income account for 1915 might be expected to throw some light on the trend of net revenues since the advances. Fiscal year figures were available from the report of the carriers to the Board and the calendar year report for 1915 was a part of the record.

For the year ended June 30th, 1915, the net revenue, after deducting taxes, and including balances for hire of equipment, joint facilities and miscellaneous rents was \$714,731. (See Preliminary Abstract for 1915, page 39.) This is a reduction in amount of net revenue from the previous year, and, when considered in connection with the increased assessed value, reduces the return of 5.7 per cent. on the value for 1914 to 3.8 per cent. on the value for 1915.

The calendar year 1915 report was put into the record and covers six additional "war boom" months. The net revenue for the calendar year after taxes, hire of equipment, joint facility rents, rents for leased ferries and miscellaneous rents of \$863,113 and this is lower than any year since 1907.

The net corporate income for the year ended June 30th, 1915, was \$470,380 after interest deductions and all other payments. This would pay on the capital stock of \$9,747,305 at the rate of 4.83 per cent., which is lower than any year since 1907. For the calendar year 1915 the net corporate income was \$488,922, and the percentage on the capital stock 5.01. From these figures it will be seen that 1915 was a poorer year than 1914. Adding the 1915 figures to the last five years of the table above we have:

<i>Year ended June 30th,</i>	RATE OF RETURN IN PER CENT. ON		
	<i>Property Investment.</i>	<i>Total Capital Obligations.</i>	<i>Capital Stock.</i>
1910	5.23	5.73	7.09
1911	6.75	7.60	10.56
1912	5.02	5.39	7.22
1913	5.28	5.93	7.63
1914	4.37	4.94	5.81
1915	2.26	2.48	4.83

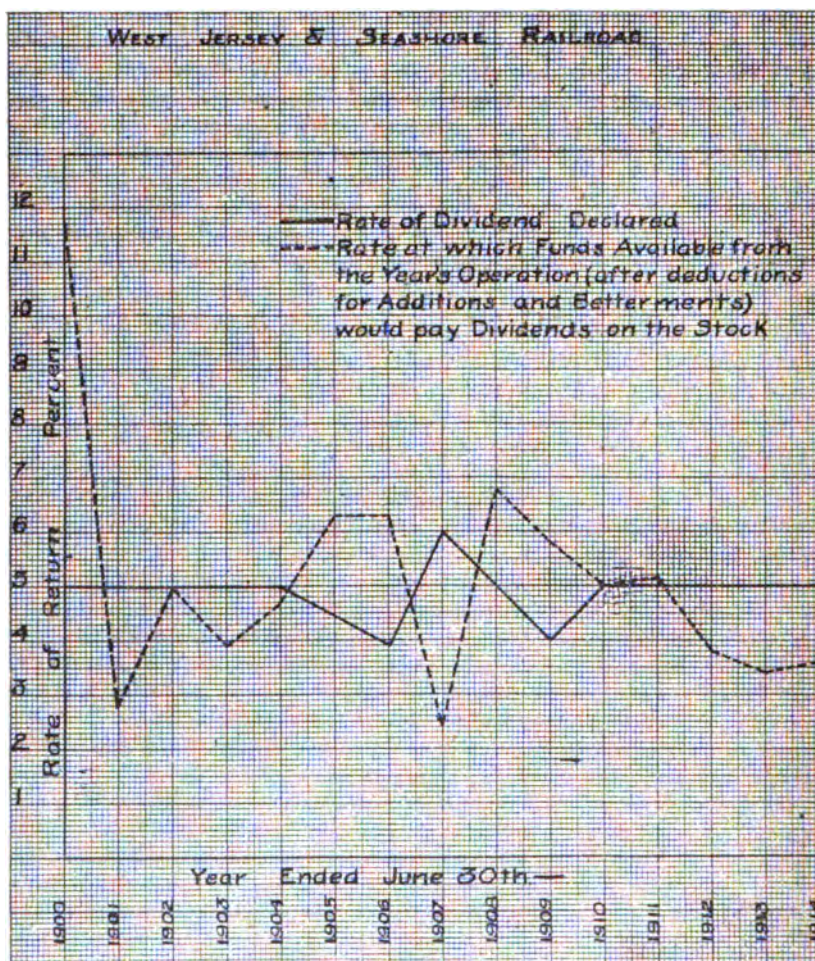
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For the fifteen years ended 1914 the West Jersey and Seashore has apparently earned on its capital stock at the rate of 8.95 per cent. and for the last five-year period at 7.66 per cent. There is no financial crisis reflected in these two facts if they were the complete statement of the situation. It will be observed that dividends have been paid on the stock at 5 per cent. in each of the years except four, and that the average for fifteen years was 4.59 per cent. The rate is, of course, artificial, and does not reflect the condition of the carrier unless an analysis of the profit and loss account is made at the same time. This analysis was made for each year by adding to the net income from operations for the year the miscellaneous profit and loss credits for the year and deducting additions and betterments and appropriations for sinking and special reserve funds leaving the amount actually earned and available for dividends.

These results, with other extracts from Exhibit P.R.R.-2, are shown in the following table. The following diagram shows the same figures graphically.

<i>Year ended June 30th,</i>	<i>Rate of Return on Capital Stock Paid by "Net Corporate Income."</i>	<i>Rate of Dividends Declared on Common Stock.</i>	<i>Rate Which Funds Actually Available for Dividends Would Pay on Capital Stock.</i>
1900	12.03	5	11.8
1901	13.13	5	2.8
1902	12.74	5	5.0
1903	12.96	5	3.9
1904	10.93	5	4.7
1905	12.40	4.5	6.3
1906	12.30	3.9	6.3
1907	3.12	6	2.4
1908	7.93	5	6.8
1909	7.81	4	5.8
1910	7.09	5	5.0
1911	10.56	5	5.1
1912	7.22	5	3.8
1913	7.63	5	3.4
1914	5.81	5	3.6

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Dividends paid have not been at the rate "earned" as stated in Exhibit P.R.R.-2 and could not have been paid at that rate. Additions and Betterments must be made from earnings and have been made on the West Jersey and Seashore to an amount of \$4,130,420 in the last fifteen years. Sinking and other reserve funds amounting to \$562,668 have been set aside out of earnings in the same period. These amounts were deducted from the

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amount "earned" on the capital stock and amounted to about 4 per cent. per annum on the par value of the stock. Dividends paid at the average of 4.89 per cent. for the fifteen years have been all the carrier could pay. The credit balance in the profit and loss account was \$703,511 at the end of 1900 and \$127,251 at the end of 1915. An increase in net earnings must be had or the present dividend rate of 5 per cent. reduced in the near future.

Division of Valuation Between Freight and Passenger Services and Rates of Return in Each Service.

Exhibit P.R.R.-10-R.H. shows in detail the assessed value of the properties of the Pennsylvania Railroad and the West Jersey and Seashore Railroad for 1914. Each item is listed under freight, passenger or common to both services. The exhibit is not useful in the form given for the reason that the total value stated for the West Jersey and Seashore is \$14,840,874, whereas the assessed valuation for 1913 was \$15,506,520 (page 770 of Exhibit P.R.R.-3-R.H. Annual Report State Board of Assessors 1913) and for 1914 was \$15,605,065.

The results derived might be applied to the total if the method used for division could be approved. The totals given were:

Freight	\$1,001,390
Passenger	3,025,221
Common	10,724,263
<hr/>	
Total	\$14,840,874

The common item was divided on the basis of train miles considering only freight trains and passenger trains. This basis gives 85.15% passenger as stated on page 4 of Exhibit P.R.R.-11-R.H., but the percentage of "common" apportioned to passenger in Exhibit P.R.R.-10-R.H. was 84.80. No reason for this discrepancy appeared. This difference in percentages is not sufficient grounds for rejecting the division, but other objections are noted. Use of the revenue train mile basis takes no account of switching operations, and charges 85 per cent. of all switching to the passenger traffic. There are separate yards for freight and passenger cars, of course, but certain tracks are used in both classes of

In re Rates—Transportation of Passengers Between Points in New Jersey.

switching, and the same locomotives are probably used in the two services. (See the discussion of operating expenses and the division of accounts, *supra*.) The operating expenses were 67.87 per cent. passenger, the operating revenues (excluding power revenue) are 70.67 per cent. passenger, and it seems unlikely that as much as 81.66 per cent. of the valuation is passenger. The latter percentage results from adding the revenue train mile percentage of the common items to the actual passenger items of valuation and dividing this sum by the total assessed valuation. See Exhibit P.R.R.-10-R.H. page 3.

On page 8 of Exhibit P.R.R.-11-R.H. the ratio of passenger investment to the total was given as 81.35 per cent. With passenger train service charged with 81.35 per cent. of the value and 67.87 per cent. of the expenses, an unfavorable showing for the passenger traffic follows at once. There is doubtless more investment per dollar of operating expenses in the passenger traffic than in the freight traffic, but not as much more as the West Jersey and Seashore claims. When consideration of switching is made in the revenue train mile basis, it will probably be found that the valuation and the operating expenses are divided between services in such proportions that the percentage of operating expenses is about equal to the percentage of valuation.

Exhibit P.R.R.-9-R.H. purports to show in detail the cost of additions and betterments by years from 1896 to 1914. Division into freight, passenger, and common was made in accordance with the facts. The figures for 1896 to 1910, inclusive, were not useful in determining the present value of the property. Items added since January 1st, 1911, tend to show the increase of value over the state revaluation of that date. They were considered in connection with Exhibit P.R.R.-5-R.H., which states for a given classification of property (exclusive of land, equipment and materials and supplies on hand) the inventory as of January 1st, 1911; increases in the inventory on account of revision by the West Jersey and Seashore; additions and betterments 1911 to 1914 inclusive; and additions and betterments in 1915 to August 31st.

Summaries of operating expenses, revenues, taxes, hire of equipment and joint facility rents (divided between freight service

In re Rates—Transportation of Passengers Between Points in New Jersey.

and passenger service) have been made, and the net income applicable to the value computed for each service. The rates of return on the two measures of value have been computed using the division between services suggested by the percentages in Exhibit P.R.R.-10-R.H. page 3 (81.35 per cent. passenger train) and also the percentage of total costs. The former division probably overstates the passenger train part of the value, and the latter probably understates the passenger train part of the value for the reasons given above. As previously stated the net revenue in excess of operating expenses, taxes, hire of equipment and joint facility rents was found to be \$750,617 in the passenger train branch of the service for the year ended December 31st, 1914.

This sum would pay return on 81.35 per cent. of the *Assessed Valuation* of \$15,605,065 at the rate of 5.91 per cent. and on 67.87 per cent. of the *Assessed Valuation* at the rate of 7.09 per cent.

The net revenue of \$750,617 would pay return on 81.35 per cent. of the *Property Investment* of \$20,173,580 at the rate of 4.57 per cent. and on 67.87 per cent. of the *Property Investment* at the rate of 5.48 per cent.

On the whole it seems evident that in 1914 the passenger train branch of the service paid between 5 and 6 per cent. return on the property devoted to this traffic. From operating ratios stated above it will be noted that strictly passenger business was slightly more profitable than all passenger train business, and that intrastate and interstate passenger traffic were about equal in earning power. This would be evident from the fact that the whole road is within the state of New Jersey. The conclusion that intrastate strictly passenger traffic paid between 5 and 6 per cent. on the value of the property devoted to such traffic in 1914 follows at once. From this earning Additions and Betterments have still to be paid. Past rates of return from passenger traffic may be approximated from the figures of the business as a whole. It is evident that passenger traffic is less profitable than formerly and that an insufficient return on the investment is earned.

(No consideration was given exhibits which purported to show revenues and expenses of particular trains between chosen points. Much more than half of the total costs was made up of items

In re Rates—Transportation of Passengers Between Points in New Jersey.

derived from general averages for the whole line and the particular trains were not shown to be representative either in service or in revenue.)

In view of the demonstrated increasing cost of operation, which is not fully met by increase of revenues, it follows that the company must be permitted to earn greater revenue from an increase of rates. The rates to be advanced are those which are shown to be below the normal level. These appear to be the commutation and excursion rates. It follows from the foregoing analysis that the advanced rates for commutation tickets have been justified, and cancellation of excursion rates as proposed, has not been justified, but that increases in excursion rates are warranted.

SECTION III.

PENNSYLVANIA RAILROAD 1914.

New Jersey Division in the State of New Jersey.

A large part of the Pennsylvania Railroad in New Jersey is included in the New Jersey Division. Details for several of the lines making up this division were filed in the record in the same volumes of exhibits treating the West Jersey and Seashore. Detailed analysis of the West Jersey and Seashore appears in another part of this report. It was impossible to make a careful study of the remainder of the Pennsylvania Railroad in New Jersey, hereinafter called the New Jersey Division, for several reasons. Total operating expenses, revenues, taxes and other costs are not filed with the Board for the separate subsidiaries and sub-divisions of the New Jersey Division, nor were they filed in the record. Exhibit P.R.R.-11-R.H. contained detailed operating expenses by primary accounts for the passenger train part of the total, but the freight part was not disclosed; the formula used in the separation was not given and the totals for freight and passenger were omitted. Lack of this data made a detailed study of the freight-passenger separation, such as was made for the West Jersey and Seashore, impossible for the New Jersey Division.

In re Rates—Transportation of Passengers Between Points in New Jersey.

The exhibit was filed by witness Fell for the carriers, and was supposed to be made on a uniform basis with the West Jersey and Seashore. The separation for the West Jersey and Seashore was found to be substantially as good as could be made, and the methods used by the carrier, as far as could be discovered, were in most cases sound. The comments made below on the showing of the New Jersey Division are based upon the assumption that the same methods were used throughout the exhibits for the West Jersey and Seashore and the New Jersey Division. Since it was impossible to check the details they have been set out in this report as stated in the exhibits or as computed from details found in the exhibits. Criticisms of methods found under the discussion of the West Jersey and Seashore apply in full force to the New Jersey Division.

Operating Expenses and Other Costs.

A combined statement of all passenger train operating expenses for the New Jersey Division was not made in the record. From details of Exhibit P.R.R.-11-R.H. such a summary has been prepared. Relative importance of the several lines may be seen in the following statement:

<i>Subdivision or Subsidiary.</i>	<i>Total Passenger Train Operating Ex- penses Entirely Within New Jersey.</i>
1. Belvidere-Delaware R. R.	\$717,013.39
2. Camden and Burlington County R. R.	306,283.70
3. Freehold and Jamesburg Agricultural R. R.	156,757.10
4. Kinkora and New Lisbon R. R.	27,458.81
5. Long Branch Division.	554,201.40
6. Millstone and New Brunswick R. R.	13,833.16
7. Mt. Holly, Lumberton and Medford R. R.	14,421.24
8. New York Division	5,242,445.17
9. Perth Amboy and Woodbridge R. R.	122,879.54
10. Philadelphia and Long Branch R. R.	229,696.41
11. Rocky Hill R. R. and Kingston Branch.	14,906.34
12. Trenton Division	1,280,393.63
13. Vincentown Branch of the Burlington County R. R. ..	8,764.43
Total New Jersey Division.	\$8,680,054.32
27	

In re Rates—Transportation of Passengers Between Points in New Jersey.

It will be observed that the New York Division is about 60 per cent. of the total and that the results for the New Jersey Division are to this extent affected by the New York Division which carries no intrastate New Jersey traffic to Philadelphia or Camden (and is not involved in the advances in suburban fares in this case). Certain additional revenues would be earned on this part of the system if the excursion fares now in effect are cancelled.

The details in the exhibit were accumulated for the five general groups of operating expenses and are set forth below, together with accumulations of taxes, hire of equipment and joint facility rents. These costs are the ones chosen by the carrier. Miscellaneous rents on the New Jersey Division (if any) should have been included. For the Pennsylvania Railroad as a whole, miscellaneous rents for the year 1914 were a credit; therefore, the statement of cost as given is probably all the costs incurred by passenger train service.

PENNSYLVANIA RAILROAD—1914.**New Jersey Division in the State of New Jersey.****OPERATING EXPENSES AND OTHER COSTS.**

	<i>Passenger Train Ex- penses En- tirely Within New Jersey.</i>	<i>Strictly Pas- senger Ex- penses En- tirely Within New Jersey.</i>	<i>Strictly Intra- state New Jersey Passen- ger Expenses.</i>
Maintenance of way and structures	\$2,122,747.06	\$1,797,498.89	\$446,413.04
Maintenance of equipment.....	1,743,561.24	1,472,116.22	327,102.13
Traffic expenses	235,195.59	226,230.95	44,418.79
Transportation expenses	4,206,203.71	3,570,705.84	864,030.79
General expenses	381,346.72	321,421.43	81,653.90
Total operating expenses...	\$8,689,054.32	\$7,387,973.33	\$1,763,618.65
Taxes	894,349.71	746,186.52	146,172.53
Hire of equipment (passenger train cars and locomotives only)	327,309.32	276,185.95	61,087.89
Joint facility rents.....	27,291.69	28,455.07	14,019.41
Total costs as stated in Exhibit P.R.R.-11-R.H.	\$9,938,005.04	\$8,438,800.87	\$1,984,898.48

Revenues were likewise assembled for the New Jersey Division under—

In re Rates—Transportation of Passengers Between Points in New Jersey.

1. Passenger Train Earnings entirely within New Jersey.
2. Strictly Passenger Earnings entirely within New Jersey.
3. Strictly Intrastate Passenger Earnings.

These designations were used by the carrier but they are misleading. The first term "Passenger Train Earnings entirely within New Jersey" is a clear misnomer because mail, express, milk and perhaps other passenger train revenues were not included. A comparison between these revenues and "Passenger Train Expenses entirely within New Jersey" cannot be made. Since the revenues here stated as passenger train revenues were used only to obtain strictly passenger earnings, obviously no erroneous results were produced or intended to be produced by this confusion of nomenclature. "Strictly Passenger Earnings entirely within New Jersey" were complete and are comparable with the corresponding operating expense statement.

PENNSYLVANIA RAILROAD—1914.

New Jersey Division in the State of New Jersey.

PASSENGER TRAIN REVENUES.

	<i>Partial Passenger Train Earnings Entirely Within New Jersey.*</i>	<i>Total Strictly Passenger Earnings Entirely Within New Jersey.</i>	<i>Total Strictly Passenger Intrastate Earnings.</i>
1. Belvidere-Delaware	\$465,812.81	\$464,044.60	\$198,373.74
2. Camden and Burlington Co.,	215,810.93	213,421.17	49,031.22
3. Freehold and Jamesburg...	156,950.60	156,608.99	92,872.36
4. Kinkora and New Lisbon..	10,065.97	9,992.70	8,197.38
5. Long Branch Division.....	626,704.66	625,687.53	272,252.45
6. Millstone and New Brunswick	4,987.10	4,984.42	2,928.03
7. Mt. Holly, Lumberton and Medford	3,576.88	3,573.63	3,459.01
8. New York Division.....	7,577,878.72	7,523,009.63	881,942.63
9. Perth Amboy and Woodbridge	162,300.32	161,797.31	77,780.81
10. Philadelphia and Long Branch	163,193.39	162,757.68	49,316.64
11. Rocky Hill R. R. and Kingston Branch	2,174.81	2,174.81	1,809.87
12. Trenton Division	801,490.14	796,376.14	322,908.78
13. Vincentown Branch	1,479.68	1,462.87	1,165.70
Total New Jersey Division.	\$10,192,435.01	\$10,125,891.48	\$1,953,038.62

*Mail, express, milk and perhaps other revenues were omitted.

In re Rates—Transportation of Passengers Between Points in New Jersey.

Operating Ratios.

Operating ratio may be defined as the ratio (in per cent.) of the operating expenses to the operating revenues. From the previous tables these ratios were derived.

	<i>Passenger Train En- tirely Within New Jersey.</i>	<i>Strictly Pas- senger En- tirely Within New Jersey.</i>	<i>Strictly Intrastate Passenger.</i>
Operating revenues	*	\$10,125,891	\$1,953,039
Operating expenses	\$8,689,054	7,387,973	1,763,619
Operating ratio (in per cent.), .....	.....	72.96	90.30
Total costs (operating ex- penses, taxes, hire of equip- ment and joint facility rents)	9,938,005	8,438,801	1,984,898
Ratio of total costs to reve- nues (in per cent.) .....	.....	83.34	101.63

*Complete figures not available.

Intrastate passenger traffic is here shown to be less profitable than interstate traffic over the same rails and to yield less revenue than the total costs for the intrastate traffic as a whole. Since an intrastate haul is generally shorter than an interstate haul, the terminal expense for an intrastate journey must be distributed over a shorter haul than for an interstate journey, and the total cost per mile traveled is, therefore, generally greater for the intrastate journey.

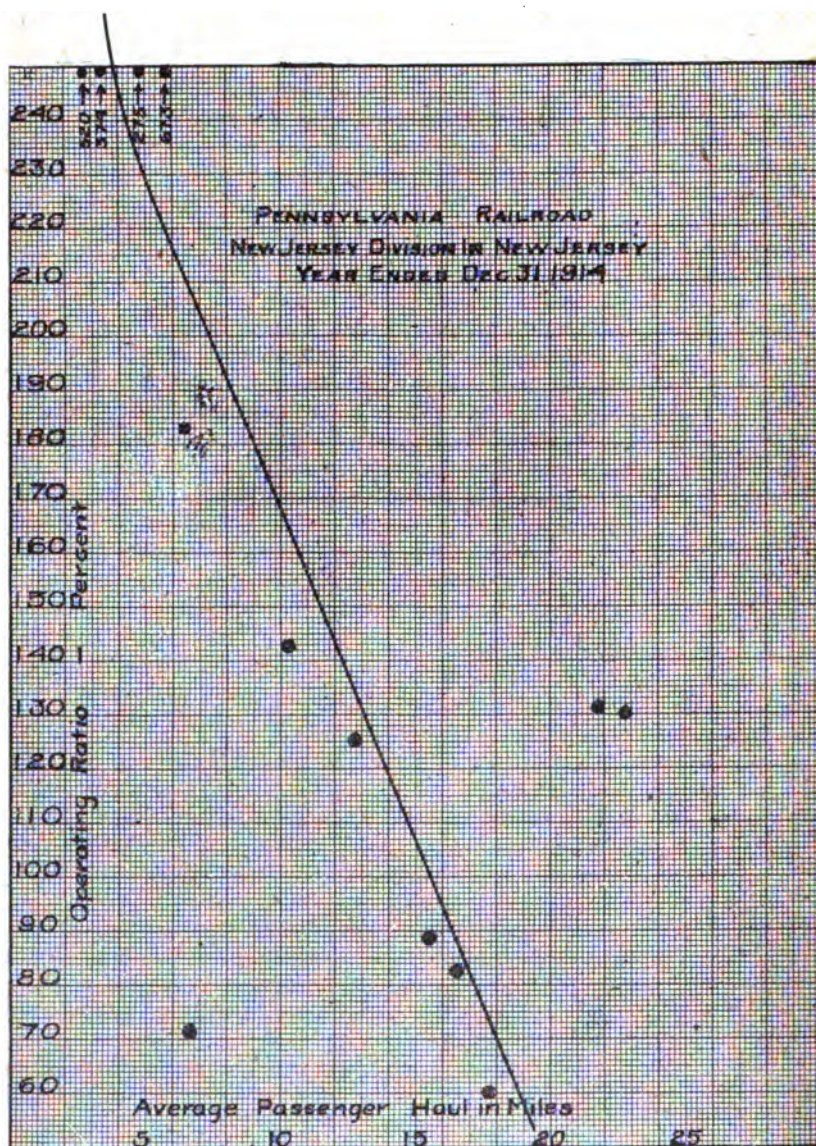
It is interesting to note the relations between average haul and operating ratio. In order to observe this relation, the operating ratio and the average haul for all passengers (intrastate and interstate combined) have been computed for each branch and each subdivision of the New Jersey Division as stated by the carrier in Exhibit P.R.R.-11-R.H. The results thus obtained were arranged in order of the operating ratio, beginning with the lowest, and are shown in the following table:

In re Rates—Transportation of Passengers Between Points in New Jersey.

	<i>Strictly Passenger Earnings Entirely Within New Jersey.</i>	<i>Strictly Passenger Operating Expenses Entirely Within New Jersey.</i>	<i>Operating Ratio In Per Cent.</i>	<i>Average Haul Per Passenger (Intra- state and Interstate Combined) Mils.</i>
New York Division.....	\$7,253,010	\$4,333,704	57.61	17.7
Perth Amboy and Woodbridge.	161,797	114,582	70.82	6.6
Long Branch Division.....	625,687	513,929	82.14	16.5
Freehold and Jamesburg.....	156,600	130,921	89.34	15.5
Camden and Burlington County.	213,421	266,934	125.07	12.8
Belvidere and Delaware.....	464,044	602,026	129.73	22.7
Philadelphia and Long Branch.	162,758	213,163	130.97	21.8
Trenton Division	796,376	1,136,133	142.66	10.1
Kinkora and New Lisbon.....	9,993	18,279	182.92	6.3
Millstone and New Brunswick.	4,984	13,692	274.72	4.8
Mt. Holly, Lumberton and Med- ford	3,574	13,349	373.50	3.5
Vincentown Branch	1,463	7,607	519.96	2.7
Rocky Hill R. R. and Kingston Branch	2,175	14,654	673.75	5.9
Total New Jersey Division..	\$10,125,891	\$7,387,973	72.96	15.9
Same, duplication of passen- gers eliminated .....	.....	.....	.....	20.8

There is a marked relation between the operating ratio and the average haul. Such an exception as the Perth Amboy and Woodbridge is readily explained by the very short mileage of the railroad. Similarly the long mileage of the Belvidere and Delaware and the Philadelphia and Long Branch might account for the high average haul in proportion to the operating ratio. The effect of short hauls on the Trenton Division is quite pronounced. This tabulation is by no means conclusive, but it tends to show that short hauls are relatively less profitable than long hauls. The accompanying diagram shows the figures in the previous table in graphic form.

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Other factors must be considered and one of these is perhaps more important than the length of average haul. Passenger miles for two months for each part of the New Jersey Division were found in Exhibit P.R.R.-11-R.H. page 6. Passenger density measured by passenger miles per mile of road for two months was computed for each part of the New Jersey Division. It was found that when the lines were arranged in order of density of traffic they were in about the same order as before. The details are found in the following table. A diagram shows the same data in graphic form.

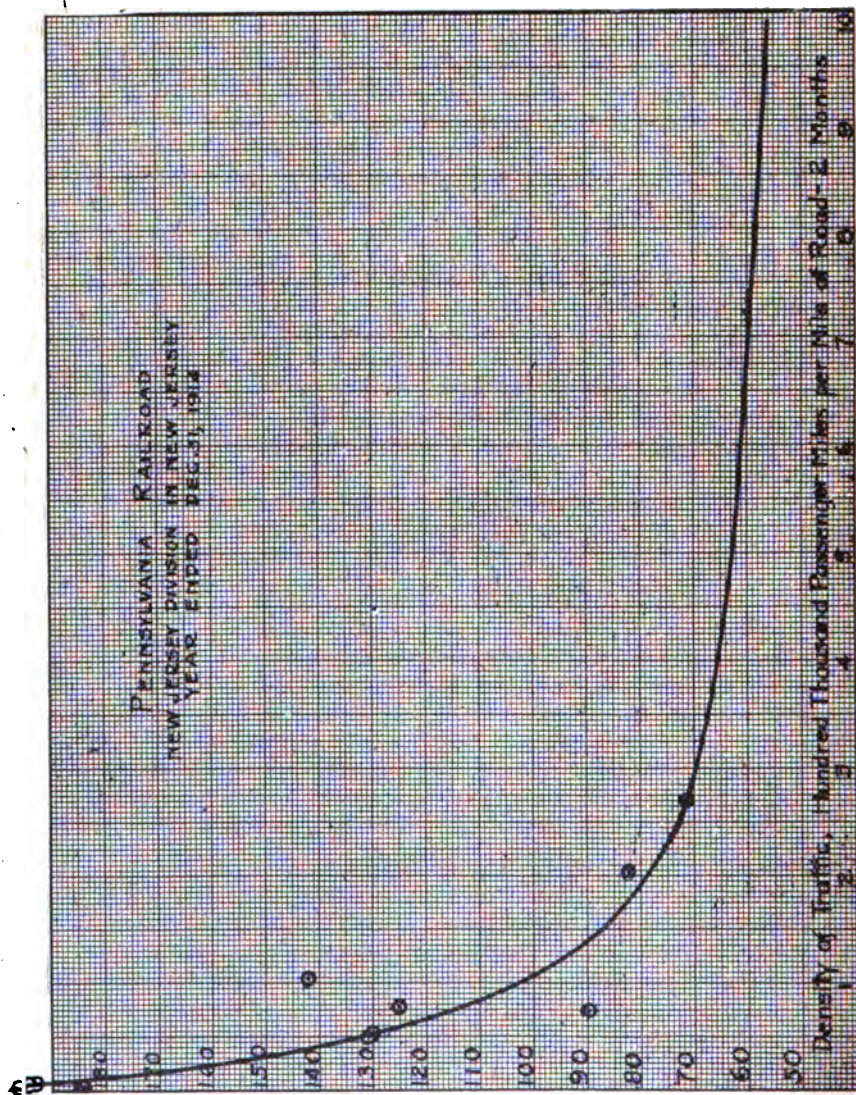
PENNSYLVANIA RAILROAD—1914.

New Jersey Division in the State of New Jersey.

MILEAGE, AVERAGE PASSENGER HAUL, OPERATING RATIO AND DENSITY OF PASSENGER TRAFFIC.

	<i>Miles of Road.</i>	<i>Average Passenger Haul Miles.</i>	<i>Operating Ratio Per Cent.</i>	<i>Density of Passenger Travel, Passenger Miles Per Mile of Road for 2 Mos.</i>
New York Division.....	59.78	17.7	57.61	1,076,551
Perth Amboy and Woodbridge.....	8.19	6.6	70.82	271,448
Long Branch Division.....	38.03	16.5	82.14	204,559
Freehold and Jamesburg.....	27.31	15.5	89.34	73,396
Camden and Burlington County.....	32.44	12.8	125.07	79,243
Belvidere-Delaware	78.87	22.7	129.73	52,237
Philadelphia and Long Branch.....	48.74	21.8	130.97	48,195
Trenton Division	74.86	10.1	142.66	104,596
Kinkora and New Lisbon.....	10.46	6.3	182.92	6,009
Millstone and New Brunswick.....	6.56	4.8	274.72	9,946
Mt. Holly, Lumberton and Medford...	5.94	3.5	373.50	3,642
Vincentown Branch	2.77	2.7	519.96	4,266
Rocky Hill R. R. and Kingston Branch,	7.12	5.9	673.75	2,256
Total New Jersey Division.....	401.07	15.9	72.96	232,892
Same, eliminating duplication of passengers .....	.....	20.8	.....	.....

In re Rates—Transportation of Passengers Between Points in New Jersey.



In re Rates—Transportation of Passengers Between Points in New Jersey.

It is difficult to say which of the two factors has the greatest effect on the operating ratio. Both are important as this table shows. The Trenton Division is again out of its normal place in the arrangement. Very high density of travel, very short average haul and high operating ratio tend to show the relative unprofitableness of short haul commutation business on the Trenton Division.

Valuation and Rate of Return.

No figures were offered to show a greater value than the assessed value for the New Jersey Division of the Pennsylvania Railroad. Exhibit P.R.R.-10-R.H. page 3, is a summary of the assessed value of main stem and second class property and shows amounts directly assigned, and amounts common to both services.

Freight	\$10,757,105
Passenger	3,310,509
Common	33,818,150
Total	<hr/> \$47,885,764

Figures were given for each of the branches and smaller divisions. A study of these figures disclosed the fact that the total included nothing for the Long Branch Division. This division is a joint facility of the Pennsylvania Railroad and the Central Railroad of New Jersey. Interest is included in joint facility rent, hence nothing should be included for valuation.

The passenger train part of the common amount was stated as \$23,122,359, and total passenger train as \$26,432,868. This amount was further divided, and the strictly passenger part stated as \$22,128,779 and the intrastate passenger part as \$4,695,418.

Apparently the common item was divided between freight and passenger on the train-mile basis. In this Exhibit 68.37 per cent. of the common valuation was considered by the carrier as passenger, while the New Jersey Division revenue train-mile basis as computed from page 7 of Exhibit P.R.R.-11-R.H. was 69.62. Use of the latter basis would be improper because mixed and special trains were not included. If the strictly freight and strictly

 In re Rates—Transportation of Passengers Between Points in New Jersey.

passenger yards were directly assigned to their respective services, the division is as good as could be made. (See the discussion on the division of common items of value between freight service and passenger service in the part of this report dealing with the West Jersey and Seashore.) The following table compiled from preceding figures speaks for itself:

NEW JERSEY DIVISION.

	<i>Strictly Passenger En- tirely Within New Jersey.</i>	<i>Strictly Intrastate Passenger.</i>
Operating revenues	\$10,125,891	\$1,953,039
Total costs (operating expenses, taxes, hire of equipment and joint facility rents)	8,438,801	1,984,898
Excess of revenues over costs	1,687,090	Loss—31,859
Assessed valuation from page 3 of Exhibit P.R.R.-10-R.II.	22,128,779	4,695,418
Rate of return on this valuation	7.62%	Loss—0.68%

So many factors enter into the necessary separations and the intrastate traffic is such a small part of the total business, that the above results must be accepted with certain reservations. The large difference in profitableness of intrastate and interstate passenger traffic is surprising when the two services use the same tracks, cars and other facilities. Intrastate passenger revenue is 19.29 per cent. of the total.

The income account for each part of the New Jersey Division was investigated. Details of the condensed income account for each branch and subdivision were compiled as follows:

In re Rates—Transportation of Passengers Between Points in New Jersey.

PENNSYLVANIA RAILROAD—1914.

New Jersey Division in New Jersey.

CONDENSED INCOME ACCOUNT FOR STRICTLY INTRASTATE PASSENGER BUSINESS FOR THE YEAR ENDED DECEMBER 31ST, 1914.

	Operating Revenue.	Operating Expenses.	Net Revenue.	Taxes, Hire of Equipment and Joint Facility Rent.	Net Operating Income.	Assessed Valuation.	Rate of Return. %
Belvidere-Delaware	\$189,373.74	\$287,186.09	Def. \$97,821.35	\$11,496.02	Def. \$100,317.37	\$801,053	Loss 13.65
Camden and Burlington County	49,031.22	58,247.81	Def. 9,216.59	4,286.15	Def. 13,502.74	104,027	Loss 12.98
Freehold and Jamesburg	92,872.36	81,830.32	11,042.04	8,194.02	2,848.02	224,862	Loss 1.27
Kinkora and New Lisbon	8,197.36	15,790.07	Def. 7,592.71	1,147.34	Def. 8,740.05	35,401	Loss 24.63
Long Branch Division	272,252.45	196,270.63	76,981.82	52,616.47	23,365.35	.....	.....
Millstone and New Brunswick	2,928.03	7,807.32	Def. 4,879.29	1,037.94	Def. 6,007.23	35,467	Loss 16.04
Mt. Holly, Lambert and Medford	3,450.01	12,450.21	Def. 9,000.20	1,427.81	Def. 10,428.01	53,065	Loss 19.66
New York Division	881,942.63	541,249.02	340,693.61	81,293.43	259,410.18	1,751,398	Loss 14.81
Perth Amboy and Woodbridge	77,780.81	44,112.52	33,668.29	6,802.54	26,865.75	119,092	Loss 22.56
Philadelphia and Long Branch	49,310.64	59,892.73	Def. 10,578.08	4,500.00	Def. 15,078.17	136,113	Loss 11.07
Reeky Hill R. R. and Kingston Branch	1,800.87	11,977.85	Def. 10,177.98	1,476.22	Def. 11,644.20	58,017	Loss 20.07
Trouton Division	322,008.78	440,682.40	Def. 117,753.71	46,094.54	Def. 164,358.25	1,364,884	Loss 12.04
Vincentown Branch	1,195.70	6,023.70	Def. 4,828.00	407.36	Def. 5,285.36	11,830	Loss 44.47
Total, New Jersey Division	\$1,953,038.62	\$1,763,618.05	\$189,419.97	\$221,270.93	Def. \$31,850.96	\$4,695,418	Loss 0.66

* The Long Branch Division consists of the New York and Long Branch Railroad, a joint facility operated in the interest of the Pennsylvania Railroad and the Central Railroad of New Jersey. Return on the property is included in the joint facility rent of \$42,069.55.

In re Rates—Transportation of Passengers Between Points in New Jersey.

The Belvidere-Delaware Railroad and the Trenton Division have large losses. The only division showing a substantial net earning on intrastate traffic is the New York Division, but here the intrastate traffic is only 12 per cent. of the total. The branches and smaller subsidiaries show losses on intrastate traffic, high percentages of intrastate travel and low density of passenger traffic. The losses are occasioned by the low density of travel fully as much as by the larger proportion of intrastate travel.

A carrier cannot claim the right to earn a profit from every mile, section or other part into which its road may be divided (*St. Louis and San Francisco v. Gill*, 156 U. S. 649, cited with approval in *Northern Pacific Railway v. North Dakota*, 236 U. S. 585, at p. 600.) This disposes of the showing made on the small branch lines, but is not final as to the Trenton Division.

TRENTON DIVISION—1914.

	<i>Passenger Train.</i>	<i>Strictly Passenger.</i>	<i>Strictly Intrastate Passenger.</i>
Earnings	*	\$796,376	\$322,909
Operating expenses	\$1,280,394	1,136,133	440,662
Operating ratio (per cent.)....	.....	142.66	136.47
Taxes	124,031	110,251	42,943
Hire of equipment.....	40,906	36,441	14,194
Joint facility rent.....	Cr. 34,114	Cr. 31,085	Cr. 10,532
Net operating loss.....	.....	455,364	164,358

*Complete figures not available.

Here the losses are substantial. This is a separate operating division with 74.86 miles of road and 114.85 miles of all main tracks. Operating revenues and expenses can be set up with a high degree of accuracy for such a division. Intrastate passenger travel was about 39 per cent. of the total during February and August, 1914.

It seems that the Pennsylvania Railroad has shown need for additional revenue from suburban business on the Trenton Division. The downward trend of net revenue and general financial situation are discussed in the following paragraphs.

In re Rates—Transportation of Passengers Between Points in New Jersey.

Downward Trend of Net Revenues on the Pennsylvania Railroad.

Exhibit P.R.R.-1 of the original hearing consisted of Income Accounts and other figures for the years 1900 to 1914, inclusive. The following summary was made:

Year Ended June 30th.	Rate of Return in Per Cent. on		Capital Stock.
	Property Investment.	Total Capital Obligations.	
1900	6.63	7.05	9.15
1901	8.02	9.18	12.98
1902	8.82	9.58	12.83
1903	8.28	8.57	11.86
1904	7.27	7.23	9.01
5 year average	7.80	8.26	10.99
1905	7.80	7.70	9.92
1906	8.31	8.02	11.93
1907	8.22	7.25	11.77
1908	6.90	6.56	10.24
1909	6.68	6.33	9.23
5 year average	7.57	7.11	10.61
1910	7.88	7.49	9.90
1911	5.53	6.48	8.13
1912	5.62	6.62	8.33
1913	5.76	6.62	7.98
1914	4.83	5.97	7.11
5-year average	5.83	6.63	8.23
15-year average	6.89	7.18	9.61

"Rate of Return Earned on Capital Stock" is an inaccurate term. It is in reality the rate at which the amount carried to the credit of profit and loss as a result of the year's operations would pay return on the capital stock if all of it were distributed as dividends. But this amount is not available for dividends. Computations have been made showing the actual rate of dividend really earned for each of the fifteen years. Deductions from the "Net Corporate Income" for each year for additions and betterments and for depreciation and other reserve funds, also addi-

 In re Rates—Transportation of Passengers Between Points in New Jersey.

tions for miscellaneous profit and loss credits, were made, and the per cent. at which the remainder would pay return on the capital stock was computed. This is the *real* "Return on Capital Stock." These figures, together with the rate of dividends paid and per cent. which Net Corporate Income bears to the capital stock (called "Return on Capital Stock" by the carrier) appear in the following table:

PENNSYLVANIA RAILROAD COMPANY AND BRANCHES.

<i>Year Ended June 30th.</i>	<i>Rate of Return Actually Earned on the Stock During the Year and Avail- able Dividends.</i>	<i>Rate of Dividends Declared.</i>	<i>Per Cent. Which "Net Corporate Income" Bears to Capital Stock (Called "Re- turn on Capital Stock" by the Carrier).</i>
1900	6.8	4.41	9.15
1901	6.5	6.08	12.98
1902	7.4	4.82	12.83
1903	8.7	5.71	11.86
1904	1.3	6.07	9.01
1905	5.9	6.23	9.92
1906	7.5	6.26	11.93
1907	7.6	7.25	11.77
1908	6.6	6.77	10.24
1909	6.3	6.28	9.23
1910	6.4	5.49	9.90
1911	5.0	5.54	8.13
1912	5.3	6.03	8.33
1913	5.8	5.57	7.98
1914	5.6	6.00	7.11
15-year average ..	6.02	6.02	9.61

Dividends have been earned and declared at the same average rate for fifteen years. Since June 30th, 1914, advances in both freight and passenger rates have been allowed. Whole line figures help but little in determining the justice of the proposed advance under consideration in this case.

Certain branches need additional revenue, especially the Trenton Division. On the showing of the Pennsylvania Railroad alone, the commutation suburban fares on the Trenton Division should be advanced, but cancellation of excursion fares is not allowed.

In re Rates—Transportation of Passengers Between Points in New Jersey.

SECTION IV.

PHILADELPHIA AND READING RAILWAY COMPANY.

Delaware and Bound Brook Branch.

The evidence regarding the Philadelphia and Reading Railway Company (Delaware and Bound Brook Branch) consisted of four exhibits; three filed in the original hearing and one filed in the rehearing. Exhibit P.&R.-1 was a condensed income account of the entire Philadelphia and Reading Railway Company for the years 1907 and 1914. The total mileage operated by the Philadelphia and Reading Railway Company in 1914 was 1,119.77. The Delaware and Bound Brook Branch has 27.02 miles of line in the State of New Jersey. The Port Reading Railroad Company in the year 1914 operated 21.16 miles of line within the State of New Jersey. The entire mileage of the Philadelphia and Reading Railway Company in New Jersey is such a small part of the total that figures for the whole line are worthless in determining whether or not advances in passenger fares are justified.

Exhibit P.&R.-2 purported to be a statement of approximate loss in local passenger service in the State of New Jersey for the year ended June 30th, 1914. Local train miles were about 20% of the total passenger train miles. Earnings per train mile as computed from this exhibit were 54.17c. Earnings per train mile on all passenger trains operated over the Delaware and Bound Brook Branch computed from figures found in the exhibit P.&R.-1-R.H. were 78.09c. Earnings per local passenger train mile were about two-thirds as great as earnings per passenger train mile for all trains operated in the State of New Jersey. In computing expenses for local passenger trains in Exhibit P.&R.-2 the train mile basis was used for a large part of the expenses. Maintenance of Way and Structures, Transportation Expenses (other than wages and fuel), General Expenses, Interest, Taxes and other small items were charged to local passenger train service on the train mile basis. Repairs to locomotives and cars were charged on the basis

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of units per locomotive mile and per car mile derived from the total Philadelphia and Reading Railway Company reports. The expenses just mentioned comprise about three-fourths of the total expenses. The other one-fourth of the total is made up of wages of engineers, firemen, conductors, agents and other employees whose duties are directly assigned to the Delaware and Bound Brook Branch in the State of New Jersey and the cost of fuel assigned to locomotives operating over the Delaware and Bound Brook Branch in the State of New Jersey. Exhibit P.&R.-2 shows a loss of approximately \$54,782 on the local passenger service for 1914. This statement is not helpful in determining the justice of the advanced passenger fares under consideration in this case for the reason that no showing of the intrastate portion of the travel on the local trains has been made. The exhibit tends to show that additional revenue is needed from some source, but does not show that intrastate passenger service is the source from which the revenue should be obtained.

Exhibit P.&R.-3 was a history of one-way excursion fares on the Philadelphia and Reading Railway in New Jersey since January 1st, 1895.

The remaining exhibit (P.&R.-1-R.H.) purported to be an intrastate passenger income account for the Delaware and Bound Brook Branch for the year ended June 30th, 1914. This exhibit was made in the same way as the Atlantic City Railroad Exhibit A.C.-4-R.H. Criticism of the method of apportionment of operating expenses between freight service and passenger service found under the Atlantic City Railroad applies to the method used on the Delaware and Bound Brook Branch. In the discussion of the Atlantic City Railroad exhibit, mention was made of the fact that switching operations had been omitted from the train mile basis in dividing Maintenance of Way and Structures. The basis used by the Atlantic City Railroad charged 83.54% of freight yards to passenger train service. On the Delaware and Bound Brook Branch 59.16% of the train miles were made in the passenger service and consequently 59.16% of the Maintenance of Yards was charged to passenger service. Since the Delaware and Bound Brook Branch is used largely in through traffic, the yards are a small part of the total mileage, and use of the train mile basis

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does not lead to errors as great in amount as were found in the Atlantic City Railroad exhibit. No figures were found in the record showing the quantity of switching done on the Delaware and Bound Brook Branch.

Difficulties were met in the analysis of the Delaware and Bound Brook Branch which were not present in the Atlantic City Railroad's exhibits. No report for this carrier was on file with the Board. Comparisons of revenues and expenses in freight service were not possible for the reason that all revenue statements were incomplete. Endeavoring to show results of intrastate passenger service in the exhibits, the carrier omitted revenues from freight, mail, express, switching and incidental services. Similar omissions as to freight service were made in statement of assessed valuation and in taxes, hire of equipment and traffic statistics.

The following analysis has been made upon the assumption that the figures in the exhibit were correct. For convenient reference, Exhibit P.&R.-1-R.H. has been copied into this analysis.

DIVISION OF OPERATING EXPENSES AND OTHER COSTS BETWEEN
FREIGHT SERVICE AND PASSENGER SERVICE.

Maintenance of Way and Structures.

Excepting maintenance of buildings, fixtures and grounds, none of the expenses of Maintenance of Way and Structures were charged in the accounting to freight or passenger service. \$304,096.66 of the total of \$309,837.30 were divided on the basis of freight and passenger train miles in road service. Mention has been made of the error introduced by omitting switching and of the small effect on the Delaware and Bound Brook. Passenger train miles were 742,240; freight train miles were 512,457 and special train miles were 27. Passenger train miles were 59.16 per cent. of the total. Maintenance of Way and Structures per train mile averaged

$$\frac{\$309,837.30}{1,254,724} = \$.2469$$

 In re Rates—Transportation of Passengers Between Points in New Jersey.

Maintenance of Equipment.

Expenses in this general group divide themselves between freight service and passenger service to a large extent. Totals in the Delaware and Bound Brook showed the following:

Freight	\$324,560.44
Passenger	145,606.99
Common	31,238.45
Total	<u>\$501,405.88</u>

Common amounts consisted of superintendence, repairs to work equipment and shop machinery. They were divided on the train mile basis 59.16 per cent. passenger. The allocated amounts showed a smaller per cent. passenger than the per cent. shown by the train mile basis.

Freight	\$324,560.44	69.03%
Passenger	145,606.99	30.97%
	<u>\$470,167.43</u>	

Since the common items consisted largely of shop superintendence and machinery and tools, it would have been better, it seems, to use the percentages of allocated charges instead of train miles. Results would have been as follows, if this method had been used:

$\$31,238.45 \times .6903 = \$21,563.90$	Freight
$\$31,238.45 \times .3097 = 9,674.55$	Passenger
<u>\$31,238.45</u>	

Compare these figures with the company's division of the common items as follows:

$\$31,238.45 \times .4084 = \$12,757.78$	Freight
$\$31,238.45 \times .5916 = 18,480.67$	Passenger
<u>\$31,238.45</u>	

The company's figure for passenger train service was \$8,806.12 higher than would have resulted by using the method suggested.

In re Rates—Transportation of Passengers Between Points in New Jersey.

The change is 1.75 per cent. of the total and if no other changes were necessary this amount might be overlooked. The final showing of cost was quite positive and would not be changed by a reduction of this amount.

It would be interesting to know how total charges to Maintenance of Equipment were made to the Delaware and Bound Brook Branch. Since the equipment was all rented from the Reading Company and its subsidiaries, it seems probable that a car mile basis was used for cars, and a locomotive mile basis for locomotives. Such investigations as could be made from the data in the record pointed to this conclusion. Under the circumstances, no other method of assigning expenses to the Delaware and Bound Brook was available.

Traffic Expenses.

All items in this general group were divided between freight and passenger service in the accounting. Passenger Traffic Expenses were but 2.78 per cent. of total passenger train expenses.

Transportation Expenses.

Total of all accounts in this general group were:

Freight	\$352,337.00
Passenger	337,553.92
Common	86,336.84
Total	<hr/> \$776,227.76

In the exhibit the common item was divided on the train mile basis. Superintendence, dispatching trains and the operation of signals, interlockers and crossing gates were the only large amounts in the common item. The train mile basis is the best that can be used for these accounts. In this exhibit switching accounts were all divided between freight and passenger train service in the accounting, as was done in the Atlantic City Railroad exhibit. It is difficult to understand how this could be done. Totals for all yard operating expenses (Accounts 67-78, inclusive) were:

 In re Rates—Transportation of Passengers Between Points in New Jersey.

Freight	\$21,482.92	50.56%
Passenger	20,944.68	49.29%
Common	65.70	0.15%
Total	<u>\$42,493.30</u>	

Since most of the passenger traffic on the Delaware and Bound Brook is through traffic (Exhibit P.&R.-2, page E, shows only 20.31% local train mileage) it is obviously improper to charge half of switching to passenger train service. A charge to passenger train service of 5 per cent. of the total would more nearly harmonize with the facts. On this assumption, the passenger part of switching expenses has been overstated about \$19,360.

Salaries of Station Employees were divided in the accounting as follows:

Freight	\$-9,528.52
Passenger	6,882.29
Common	<u>3,712.87</u>
Total	\$40,123.68

The common item (9.25 per cent. of the total) was divided on the train mile basis.

Cost of Road Enginemen per train mile was computed:

$$\text{Freight} \quad \frac{\$55,936.41}{512,457} = 10.02c.$$

$$\text{Passenger} \quad \frac{\$58,011.79}{742,240} = 7.82c.$$

Cost of Fuel per train mile was computed:

$$\text{Freight} \quad \frac{\$106,299.76}{512,457} = 20.74c.$$

$$\text{Passenger} \quad \frac{\$107,014.85}{742,240} = 14.42c.$$

In re Rates—Transportation of Passengers Between Points in New Jersey.

Cost of Road Trainmen per train mile was computed:

	\$81,400.54	
Freight	<u>512,457</u>	= 15.88c.
	\$64,149.50	
Passenger	<u>742,240</u>	= 8.64c.

These units show costs per freight train mile higher than for a passenger train mile. The ratio of the freight unit cost to passenger unit cost for each account was in harmony with results derived from other carriers. The items are readily separable in the accounting and there is every evidence that the division was a proper one.

Scrutiny of the remaining transportation accounts leads to the conclusion that proper divisions were made. Excepting the switching accounts, the carrier's statement of the separation of transportation expenses between freight service and passenger service may be accepted. Switching for passenger service was overstated about \$19,360.

General Expenses.

None of the charges under this general group of expenses could be assigned to freight service or passenger service. Revenue train miles were used in the exhibit to divide expenses between freight and passenger. A more equitable basis would have been the percentages of all other accounts in the first four main groups (Accounts 1 to 105, inclusive). Making the revisions for Maintenance of Equipment and for Transportation Expenses suggested in the discussion, the four main groups are divided as follows:

	Total.	Freight.	Passenger.
I. Maintenance of way and structures	\$309,837.30	\$125,991.21	\$183,846.09
II. Maintenance of equipment.....	501,405.88	346,124.34	155,281.54
III. Traffic expenses	39,288.78	17,167.72	22,081.06
IV. Transportation expenses	776,227.76	406,956.97	369,270.79
	<u>1,626,699.72</u>	<u>\$896,240.24</u>	<u>\$730,459.48</u>
Total above		55.10%	44.90%

 In re Rates—Transportation of Passengers Between Points in New Jersey.

The revenue train mile basis assigned 59.16% of General Expenses to passenger train service, while all other operating expenses are 44.90% passenger train. Applying the percentages of the first four groups of expenses to the total amount of General Expenses the results would be:

$\$61,102.90 \times .5510 = \$33,667.70$	Freight
$\$61,102.90 \times .4490 = 27,435.20$	Passenger
<u> </u>	
$\$61,102.90$	

and total operating expenses, modified in accordance with all the foregoing suggestions would be

Freight	\$929,907.94	55.10%
Passenger	757,894.68	44.90%
	<u> </u>	
Total	\$1,687,802.62	

Exhibit P.&R.-1-R.H. gave total passenger train operating expenses as \$794,774.08 or \$36,879.40 greater.

Taxes.

Details for taxes and assessed value were given for passenger and common items, but not for freight items. It was impossible to investigate the propriety of division of the total. Passenger train taxes were stated as \$40,032.91.

Rental on Equipment.

Lacking definite hire of equipment figures for the Delaware and Bound Brook Branch, the estimate made on page F of the exhibit is the best that could be made. Passenger train "rental on equipment" was estimated by the carrier at \$20,176.04.

Miscellaneous Rent Income.

Item accepted as stated, \$2,922.91 passenger.

All costs have been assembled on the following sheet using the figures given in the exhibit. As stated above, the passenger train total is about \$36,879 greater than it should be. The complete statement of costs as found in the exhibit appears in the following:

In re Rates—Transportation of Passengers Between Points in New Jersey.

PHILADELPHIA AND READING RAILWAY COMPANY.

DELAWARE AND BOUND BROOK BRANCH.

Separation of Operating Expenses and Other Costs Between Freight Service
and Passenger Service as Shown in Exhibit P.&R.-1-R.H.

Year Ended June 30th, 1914.

	<i>Total.</i>	<i>Freight.</i>		<i>Passenger.</i>	
		<i>Amount.</i>	<i>%</i>	<i>Amount.</i>	<i>%</i>
Maintenance of way and structures,	\$309,837.30	\$125,991.21	40.66	\$183,846.09	59.34
Maintenance of equipment	501,405.88	337,318.22	67.27	164,087.66	32.73
Traffic expenses	39,228.78	17,167.72	43.76	22,061.06	56.24
Transportation expenses	776,227.76	387,596.97	49.93	388,630.79	50.07
General expenses	61,102.90	24,954.42	40.84	36,148.48	59.16
Total operating expenses	\$1,687,802.62	\$893,028.54	52.91	\$794,774.08	47.09
Taxes				40,032.91	
Rental on equipment @ 4% of value....				20,176.04	
Miscellaneous rent income,	Cr. 4,940.68	Cr. 2,017.77		Cr. 2,922.91	
Total costs				\$852,060.12	

Revenues.

Mail, express, milk, freight, switching and incidental revenues were not stated in the exhibit. Intrastate passenger revenue, intrastate excess baggage revenue, intrastate special train service revenue, revenue for station and train privileges, storage of baggage and telephone commissions were the only revenues stated. Intrastate passenger revenue was 9.90 per cent. of total passenger revenue in New Jersey. Rough estimates of passenger train revenues were obtained by dividing intrastate revenues by this percentage and adding other revenues which were both interstate and intrastate.

In re Rates—Transportation of Passengers Between Points in New Jersey.

Intrastate passenger revenue.....	\$57,385.66/9.90%—	\$579,653
Intrastate excess baggage revenue.....	179.14/9.90%—	1,809
Intrastate special service train revenue.....	286.92/9.90%—	2,898
Total above		\$584,360
Total station and train privileges.....		353
Total storage of baggage.....		61
Total telephone commissions		49
Estimated total strictly passenger revenue.....		\$584,825

The rough nature of this estimate should be remembered in the computations which involve revenues. No figures for passenger *train* revenues (distinguished from *strictly* passenger revenues) were available. Operating Ratio cannot be computed for passenger train service.

Division of Operating Expenses Between Strictly Passenger Service and Other Services on Passenger Trains.

The car mile basis (79.78 per cent. strictly passenger) was used for the division of all expenses. Details of method of compilation of this basis and of the test period during which car miles were studied were not stated. Figures for operating expenses and total costs of all passenger train operations were derived above. The carrier's figures were:

Passenger train operating expenses.....	\$794,774.08
Passenger train total costs.....	852,060.12

Strictly passenger figures were derived by taking 79.78 per cent. of these totals:

Strictly passenger operating expenses.....	\$634,070.76
Strictly passenger total costs.....	679,773.56

In the discussion of operating expenses certain suggested changes in methods of apportionment indicated that the passenger part of operating expenses was \$36,879.40 too high.

Revised figures for strictly passenger business would, therefore, be \$29,422.39 less than the amounts just stated ($\$36,879.40 \times .7978 = \$29,422.39$). Operating ratios have been computed for both sets of figures.

In re Rates—Transportation of Passengers Between Points in New Jersey.

Operating Ratios.

From the above paragraphs the following results were derived:

Strictly passenger operating revenue.....	\$584,825
Strictly passenger operating expenses (carrier's statement).....	634,071
Strictly passenger operating expenses (revised figures).....	604,648
Operating ratio (carrier's statement).....	108.42%
Operating ratio (revised figures).....	103.39%

The ratio of total costs (carrier's statement \$679,744) to revenue (\$584,825) was 116.24 per cent. The ratio of total costs (revised figure \$650,351) to revenue (\$584,825) was 111.20 per cent.

Operating loss from the carrier's statement was \$94,949.00 and from the revised statement was \$65,526.00.

Since an operating deficit has been shown in both sets of computations, it is not necessary to investigate assessed value or other measures of the value of the property. Any computations tending to show rate of return from the passenger traffic would be superfluous.

The intrastate passenger business on this road is relatively small and the increase in revenue, therefore, from such business must be trifling. The proposed increases are found to be justified.

The details of the method of assigning revenue of through tickets to the Delaware and Bound Brook Branch were not stated in the record. Upon the accuracy and thoroughness of this revenue compilation depends the whole financial showing. The passenger mile basis is generally used for this purpose.

Separation of Strictly Passenger Revenues and Expenses Between Intrastate and Interstate Traffic.

A study of revenue was made by the carrier and it was determined that 9.90 per cent. of the strictly passenger revenue was intrastate. Operating expenses and costs were divided between intrastate and interstate on the revenue percentage. Hence, operating expenses, total costs, revenues and operating losses are exactly 9.90 per cent. as great in intrastate traffic as in the strictly passenger traffic just discussed. Operating ratios and other percentage relations are the same as for all strictly passenger service.

In re Rates—Transportation of Passengers Between Points in New Jersey.

Intrastate passenger revenue.....	\$57,897.68
Operating expenses (company's statement).....	62,773.01
Operating expenses (revised figures).....	59,860.19
Operating ratio (company's statement).....	108.42
Operating ratio (revised figures).....	103.39
Total costs (company's statement).....	62,297.58
Total costs (revised figures).....	64,384.77
Loss on intrastate passenger traffic (company's statement).....	9,399.90
Loss on intrastate passenger traffic (revised figures).....	6,487.09

P.&R.-R.II-1 (A)

PHILADELPHIA AND READING RAILWAY COMPANY.

DELAWARE AND BOUND BROOK BRANCH.

Income Account.

Strictly Passenger—Intrastate.

Year Ended June 30th, 1914.

Operating revenues—

Passenger	\$57,385.66
Excess baggage	179.14
Special train service revenue.....	286.92
Station and train privileges.....	\$354.59
Storage baggage	60.55
Telephone commissions	49.11

Intrastate—9.90% of \$464.25

45.96

Operating expenses (B) and (C-1-2-3).....	\$57,897.68
Operating expenses (B) and (C-1-2-3).....	62,773.01
Net operating loss	\$4,875.33
Taxes (D)	3,161.89
Net operating loss	\$8,037.22
Other income—	
Miscellaneous rent income (E).....	230.86
Net loss	\$7,806.36
Deductions from income—	
Rental of equipment (F).....	\$1,593.55
Rental of road (G).....	9,957.63
	11,551.18
Total loss	\$19,357.54

In re Rates—Transportation of Passengers Between Points in New Jersey.

P.&R.-R.H.-1 (B)

PHILADELPHIA AND READING RAILWAY COMPANY.

DELAWARE AND BOUND BROOK BRANCH.

Statement of Approximate Operating Expenses Accruing to Strictly Passenger
—Intrastate.

Year Ended June 30th, 1914.

	<i>Common.</i>	<i>Freight.</i>	<i>Passenger.</i>
Maintenance of way and structures...	\$304,096.06	\$1,798.13	\$3,942.51
Maintenance of equipment.....	31,238.45	324,560.44	145,606.99
Traffic expenses .....	.....	17,167.72	22,061.06
Transportation expenses	86,336.84	352,337.00	337,553.92
General expenses	61,102.90	.....	.....
Total operating expenses.....	\$482,774.85	\$695,863.29	\$500,164.48
<i>Common item divided between passenger and freight on revenue train mileage basis. Passenger 59.16% of \$482,774.85.....</i>			
			285,609.00
Total passenger expenses			\$794,774.08
Strictly passenger determined by equating the passenger car miles 79.78%			634,070.76
Strictly passenger-intrastate percentage of intrastate passenger revenue to total passenger revenue. 9.90%.....			62,773.01

P.&R.-R.H.-1 (C-1)

PHILADELPHIA AND READING RAILWAY COMPANY.

DELAWARE AND BOUND BROOK BRANCH.

Year Ended June 30th, 1914.

Maintenance of Way and Structures.

<i>Account.</i>	<i>Passenger.</i>	<i>Freight.</i>	<i>Common.</i>
Superintendence	\$11,580.56
Ballast	10,545.44
Ties	33,866.40
Rails	26,435.50
Other track material.....	19,090.23
Roadway and track.....	99,517.55
Removal of snow, sand and ice.....	19,100.63
Tunnels
Bridges, trestles and culverts.....	61,620.66
Over and under grade crossings.....	1,123.73
Grade crossings, fences, cattle guards and signs	2,295.15
Snow and sand fences and snow sheds,	182.74
Signals and interlocking plants.....	12,147.22

In re Rates—Transportation of Passengers Between Points in New Jersey.

<i>Account.</i>	<i>Passenger.</i>	<i>Freight.</i>	<i>Common.</i>
Telephone and telegraph lines.....	1,247.08
Electric power transmissions.....
Buildings, fixtures and grounds.....	\$3,942.51	\$1,798.13	3,380.71
Docks and wharves.....
Roadway tools and supplies.....	3,707.81
Injuries to persons.....	260.17
Stationery and printing.....	280.90
Other expenses.....
Maint. Jt. Tr. Yards and O. Fac. Dr...	1,486.80
Maint. Jt. Tr. Yards and O. Fac. Cr...	Cr. 3,778.62
Totals	\$3,942.51	\$1,798.13	\$304,096.68

Maintenance of Equipment.

Superintendence .....	.....	.....	\$8,149.97
Snap machinery and tools.....	.....	.....	13,915.02
Steam locomotives—Repairs	\$94,011.91	\$80,926.76	.....
Steam locomotives—Renewals .....	.....	2,607.40	.....
Freight train cars—Repairs.....	.....	194,392.12	.....
Freight train cars—Renewals.....	.....	40,634.16	.....
Passenger train cars—Repairs.....	49,247.39	.....	.....
Passenger train cars—Renewals.....	2,347.69	.....	.....
Work equipment—			
Locomotives—Repairs .....	.....	.....	4,108.41
Cars—Repairs .....	.....	.....	3,436.60
Cars—Renewals .....	.....	.....	636.14
Injuries to persons.....	.....	.....	260.01
Stationery and printing.....	.....	.....	501.55
Other expenses .....	.....	.....	230.75
Totals	\$145,606.99	\$324,560.44	\$31,238.45

P.&R.-R.H.-1 (C 2)

PHILADELPHIA AND READING RAILWAY COMPANY.

DELAWARE AND BOUND BROOK BRANCH.

Transportation Expenses.

Year Ended June 30th, 1914.

<i>Account.</i>	<i>Passenger.</i>	<i>Freight.</i>	<i>Common.</i>
Superintendence .....	.....	.....	\$16,401.57
Dispatching trains .....	.....	.....	7,082.99
Station employees	\$6,882.29	\$29,528.52	3,712.87
Weighing and car service associations, .....	.....	284.40	.....
Station supplies and expenses.....	2,696.40	928.77	1,175.19
Yardmasters and their clerks.....	1,154.79	840.03	.....
Yard conductors and brakemen.....	8,739.55	8,489.09	.....
Yard switch and signal tenders.....	145.84	.....	65.70

In re Rates—Transportation of Passengers Between Points in New Jersey.

<i>Account.</i>	<i>Passenger.</i>	<i>Freight.</i>	<i>Common.</i>
Yard supplies and expenses.....	745.29	.....	.....
Yard enginemen	3,954.66	4,840.60	.....
Engine house expenses—Yard.....	1,194.43	1,738.81	.....
Fuel for yard locomotives.....	4,277.17	5,072.67	.....
Water for yard locomotives.....	544.43	236.89	.....
Lubricants for yard locomotives.....	84.94	121.64	.....
Other supplies for yard locomotives...	103.58	143.19	.....
Road enginemen	58,011.79	55,936.41	.....
Enginehouse expenses—Road	24,660.85	11,082.52	.....
Fuel for road locomotives.....	107,014.85	106,299.76	.....
Water for road locomotives.....	4,233.68	4,892.98	.....
Lubricants for road locomotives.....	2,041.85	1,767.18	.....
Other supplies for road locomotives...	2,159.49	3,346.20	.....
Road trainmen	64,149.50	81,400.54	.....
Train supplies	40,810.14	3,272.02	.....
Interlocking, block and other signal operations .....	.....	.....	36,345.38
Crossing flagmen and gatemen.....	.....	.....	8,420.72
Clearing wrecks .....	.....	3,681.05	.....
Telegraph and telephone operation....	.....	.....	2,109.71
Stationery and printing.....	.....	.....	8,617.89
Other expenses	577.37	230.84	.....
Loss and damage—Freight.....	.....	20,744.97	.....
Loss and damage—Baggage.....	64.32	.....	.....
Damage to property.....	2,059.69	1,276.53	.....
Damage to stock on right of way.....	233.37	21.60	.....
Injuries to persons	1,013.65	6,159.79	.....
Operating joint tracks.....	.....	.....	2,404.82
	\$337,553.92	\$352,337.00	\$86,336.84

P.&R.-R.H.-1 (C-3)

PHILADELPHIA AND READING RAILWAY COMPANY.

DELAWARE AND BOUND BROOK BRANCH.

Year Ended June 30th, 1914.

Traffic Expenses.

<i>Accounts.</i>	<i>Direct Passenger.</i>	<i>Direct Freight.</i>
Superintendence	\$6,410.17	\$6,655.92
Outside agencies	5,641.55	3,431.25
Advertising	8,598.90	.....
Traffic associations	290.43	409.91
Fast freight lines.....	.....	4,050.32
Industrial and immigration bureau.....	.....	.....
Stationery and printing.....	1,120.01	2,620.32
Other expenses .....	.....	.....
Totals	\$22,061.06	\$17,167.72

In re Rates—Transportation of Passengers Between Points in New Jersey.

General Expenses.		
	<i>Account.</i>	<i>Common.</i>
Salaries and expenses of general officers.....		\$6,398.19
Salaries and expenses of clerks and attendants.....		30,661.75
General office supplies and expenses.....		3,685.34
Law expenses		5,362.20
Insurance		
Relief department		2,454.80
Pensions		8,716.57
Stationery and printing.....		2,353.08
Valuation expenses		504.92
Other expenses		966.05
Totals		\$61,102.90

P.&R.-R.H.-1 (D)

PHILADELPHIA AND READING RAILWAY COMPANY.

DELAWARE AND BOUND BROOK BRANCH.

Taxes Accruing to Strictly Passenger—Intrastate.

Calendar Year 1914.

	<i>Common.</i>	<i>Passenger.</i>
Valuation—		
Main stem	\$2,314,787.00	.....
Franchise	1,000.00	.....
Tangible personal property—Furniture	1,015.00	.....
Tangible personal property—2 passenger locomotives, exclusively Delaware and Bound Brook Branch .....	.....	\$6,821.00
Tangible personal property—18 passenger locomotives; 67% of their value, viz. \$185,753, assessed against Delaware and Bound Brook Branch .....	.....	124,454.51
Miscellaneous road equipment.....	4,589.00	.....
Passenger train cars.....	.....	306,956.00
Total	\$2,321,391.00	\$498,231.51
Tax @ \$2.024 per \$100 valuation.....	\$46,984.95	\$10,084.21
Tax on real estate used for railroad purposes other than main stem.....	2,184.78	859.89
Total tax	\$49,169.73	\$10,944.10
Common item divided between passenger and freight on basis of revenue train miles, passenger 59.16%.....		29,088.81
Total passenger		\$40,032.91
Strictly passenger determined by equating the passenger car miles 79.78%		31,938.26
Strictly passenger-intrastate percentage of intrastate passenger revenue to total passenger revenue 9.90%.....		3,161.89

In re Rates—Transportation of Passengers Between Points in New Jersey.

P.&R.-R.H.-1 (D-1)

PHILADELPHIA AND READING RAILWAY COMPANY.

DELAWARE AND BOUND BROOK BRANCH.

Tax on Real Estate Used for Railroad Purposes Other Than Main Stem.

Calendar Year 1914.

	<i>Passenger.</i>	<i>Freight.</i>	<i>Common.</i>
Main Line—D. & B. B. R. R.—			
Ewing Township, Mercer County.....	\$60.15	\$8.32	\$143.83
Hopewell Township, Mercer County....	6.90	8.91	74.10
Pennington Borough, Mercer County...	6.04	3.62	108.54
Hopewell Borough, Mercer County....	92.16	15.52	166.13
Montgomery Township, Somerset County,	72.28	.35	140.30
Hillsborough Township, Somerset			
County	39.53	16.48	48.43
Trenton Branch—			
Ewing Township, Mercer County.....	8.70	.....	52.10
Trenton City, Mercer County.....	574.13	457.81	1,451.35
East Trenton Railroad—			
Trenton City, Mercer County.....	.....	170.94	.....
Ewing Township, Mercer County.....	.....	25.61	.....
Lawrence Township, Mercer County...	.....	8.68	.....
Totals	\$850.89	\$716.24	\$2,184.78

P.&R.-R.H.-1 (E)

Year Ended June 30th, 1914.

Other Income.

Miscellaneous rent income.....	\$4,490.68
Divided between passenger and freight on revenue train mile- age basis. Passenger, 59.16% of \$4,490.68.....	2,922.91
Strictly passenger determined by equating the passenger car miles 79.78%	2,331.90
Strictly passenger-intrastate percentage of intrastate passenger to total passenger revenue 9.90%.....	230.86

P.&R.-R.H.-1 (F)

PHILADELPHIA AND READING RAILWAY COMPANY.

DELAWARE AND BOUND BROOK BRANCH.

Passenger Equipment—Rental.

Year Ended June 30th, 1914.

In New York service—

18 passenger locomotives, valued at.....	\$316,500.00
24 combination passenger cars, valued at.....	160,800.00
38 passenger coaches, valued at.....	311,600.00

Total \$788,900.00

In re Rates—Transportation of Passengers Between Points in New Jersey.

Apportioned to Delaware and Bound Brook Branch on basis of mileage between Philadelphia, Pa., and Bound Brook Junction, N. J. 27.02/58.40 of \$788,900.....	\$365,001.00
Entirely on Delaware and Bound Brook Branch—	
2 passenger locomotives	17,400.00
4 combination cars	26,000.00
12 passenger coaches	96,000.00
	<hr/>
	\$504,401.00
<i>Strictly passenger</i> determined by equating the passenger car miles 79.78%	402,411.12
<i>Strictly passenger-intrastate</i> percentage of intrastate passenger revenue to total passenger revenue 9.90%	39,838.70
Rental @ 4% on investment.....	1,593.55

P.&R.-R.H.-1 (G)

PHILADELPHIA AND READING RAILWAY COMPANY.

DELAWARE AND BOUND BROOK BRANCH.

Rental Accruing to Strictly Passenger—Intrastate.

Year Ended June 30th, 1914.

Interest on first mortgage bonds—\$1,800,000 @ 3½%	\$63,000.00
Interest on real estate mortgages.....	107.50
Dividends—\$1,800,000 @ 8%	144,030.00
Organization expenses	6,000.00
	<hr/>
	\$213,107.50
Dividend between passenger and freight on revenue train mile basis. Passenger 59.16%	126,074.40
<i>Strictly passenger</i> determined by equating the passenger car miles 79.78%	100,582.16
<i>Strictly passenger-intrastate</i> percentage of intrastate passenger revenue to total passenger revenue—9.90%	9,957.63

A careful, thorough and, as we believe, accurate review of the entire record convinces us that some increases of revenues are not only justified, but are in the cases of some of the roads involved, required if they are to be permitted to keep abreast of the increase in the cost of operation. As has been pointed out, taxes have been steadily increased, frequently, as in the case of the West Jersey, out of proportion to the increase of property value in the year the increase occurs. No valid objection can be offered to the imposition of taxes upon a true valuation and in accordance with uniform rules. But attention is sought to be directed to the apparent fact that if the public demands higher taxes from public

In re Rates—Transportation of Passengers Between Points in New Jersey.

utility companies, higher rates may be necessary from its patrons, since its revenues are derived entirely from the public which it serves. It is this same public that is benefited by the imposition of the taxes.

Since the submission of this case the cost of operation has not decreased, and it is not unreasonable to assume that the figures for 1914 are not unduly advantageous to the companies, as was urged by the objectors.

Under all the circumstances we find and determine that the carriers involved are entitled to some increases, but not in the form proposed.

The Board, therefore, finds and determines that the proposed increases are unjust and unreasonable and disapproves the same.

The Board also finds and determines that the proposed withdrawal of any forms of tickets, as well as the withdrawal of privileges heretofore enjoyed in connection therewith, are not justified and disapproves the same.

The Atlantic City Railroad may make effective forthwith tariffs increasing the rates of commutation tickets as proposed, and increasing excursion fares to a level approximating 175% of one-way fares.

The West Jersey and Seashore Railroad Company may make effective forthwith tariffs increasing the rates for commutation tickets as proposed, and increasing excursion fares to a level approximating 175% of one-way fares.

The Pennsylvania Railroad Company may make effective forthwith tariffs increasing the rates of commutation tickets on the Trenton Division of said company as proposed by it.

The Philadelphia and Reading Railway Company may make effective forthwith tariffs increasing the rates of commutation tickets as proposed, and increasing excursion fares to a level approximating 175% of one-way fares.

The commutation tickets are to be sold for the same periods as similar tickets used in interstate travel.

In constructing the tariffs it will be necessary to adjust fares so that a proper relation is maintained between fares to various points.

Dated September 10th, 1917.

Elwood Board of Trade v. West Jersey and Seashore R. R. Co.

No. 462.

ELWOOD BOARD OF TRADE

v.

WEST JERSEY AND SEASHORE RAILROAD COMPANY.

IN RE PETITION FOR ADDITIONAL PROTECTION AT GRADE CROSS-
ING, UNION AVENUE, ELWOOD.

To afford reasonable protection at the railroad grade crossing under consideration a flagman should be stationed at the same during the period of the summer train schedule; a bell of louder tone should be substituted for the one now in use, and the track circuit arranged so that the bell will ring at the approach of trains in either direction on the northbound and southbound tracks.

W. Blair, for the complainant.

James Buckelew, for the respondent.

The petition of the Elwood Board of Trade alleges that the grade crossing of the West Jersey and Seashore Railroad at Union Avenue, Elwood, should be protected by a flagman during the period of the summer train schedule; that occasional southbound trains are operated on the northbound track, for which movement no signal is given by the automatic bell installed at the crossing.

Elwood is located on the Camden and Atlantic City Division of the West Jersey and Seashore Railroad, with two main tracks crossing the highway at Elwood Avenue, which point is protected by an automatic bell and grade crossing sign. The following statement as to conditions at the crossing was made at the hearing by the Chief Inspector of the Board:

"The station building is located on the southwest corner with siding and freight house on westerly side of the right of way. Approaching from the west side, the highway, before reaching the tracks, turns sharply to the north, thence around the station building to the east, crossing the tracks at right

Elwood Board of Trade v. West Jersey and Seashore R. R. Co.

angles. At a point 35 feet from the nearest rail on the westerly side, there is a view of northbound trains of about 100 feet south of the crossing, and at the same distance, the view of southbound trains is 800 feet. Express trains between Camden and Atlantic City pass over the crossing at a speed of 60 miles per hour. Trains traveling at this speed would cover the distance a northbound train can be seen at 35 feet from the nearest rail on the westerly side in about one second; the 800-foot view of southbound trains would be covered in nine seconds. On the northeast corner, parallel with the track, is a row of trees, and at a point 35 feet from the nearest rail approaching from the easterly side, on account of trees obstructing the view, northbound trains can be seen 600 feet, which distance would be covered in seven seconds. The crossing, in my opinion, is not properly protected by bell, only, especially during the summer season when the number of trains is increased."

No objection was made as to the accuracy of the Chief Inspector's testimony with respect to conditions at the crossing.

Union Avenue is the principal thoroughfare through Elwood, and while the pedestrian and vehicular travel over the crossing cannot be considered heavy during the entire year, there is considerable travel over the crossing during the summer months. In this case the controlling factors which should govern the provision of protection are the limited views at approaches to the crossing, and the fast train movements. The crossing is used by passengers to and from trains, the station being located on the crossing, and as the highway is used to a considerable extent during the summer season, the conditions would appear to warrant additional protection during this period.

As trains are occasionally operated over the crossing in reverse direction, and the bell does not ring as such movements approach the crossing, the track circuit should be so arranged that no movement on either track in any direction can be made without operation of automatic bell.

To afford reasonable protection at Union Avenue, a flagman should be stationed at the crossing during the period of the summer train schedule; a bell of louder tone should be substituted for the one now in use at the crossing, and the track circuit arranged so that the bell will ring at approach of trains operated in either direction on the northbound and southbound tracks. Protection by flagman should commence with the effective date of the summer schedule of 1918.

An order requiring this will accordingly issue.

Dated September 17th, 1917.

Woodstown Chamber of Commerce v. West Jersey and Seashore R. R. Co.

No. 463.

WOODSTOWN CHAMBER OF COMMERCE

v.

WEST JERSEY AND SEASHORE RAILROAD COMPANY.

**IN RE PETITION FOR ADDITIONAL PROTECTION AT GRADE CROSS-
ING, EAST AVENUE, BOROUGH OF WOODSTOWN.**

1. To erect an overhead bridge for use of pedestrians in crossing a railroad track with an open way to cross the tracks at grade would be a useless attempt to improve conditions, as the use of the bridge would not be assured, owing to other and more convenient means of crossing at grade.

2. To provide reasonable protection at the crossing, an audible, visible signal should be installed and drill movements on siding track west of main track should be protected by a member of the crew stationed in the highway before movements are made across the same.

E. C. Waddington, for the complainant.

James Buckelew, for the respondent.

The petition of the Chamber of Commerce of the Borough of Woodstown alleges that the grade crossing at East Avenue on the Salem Branch of the West Jersey and Seashore Railroad is unprotected, except grade crossing signs; and that because of the amount of travel thereat, especially of school children, gates should be installed or a flagman stationed at the crossing. The latter count is denied in the answer, the Railroad Company claiming that neither a flagman nor gates would properly protect the crossing in its use by pedestrians, and suggesting the erection of an overhead foot bridge at the crossing as the most adequate method of affording protection for pedestrians.

East Avenue runs in an east and west direction, joining South Main Street, west of the crossing about the center of the business

Woodstown Chamber of Commerce v. West Jersey and Seashore R. R. Co.

section of the borough. It is one of the principal highways in the vicinity, and is described in the testimony of a member of the Board of Chosen Freeholders as a portion of a highway route, now under construction through Woodstown between the ferries at Pennsgrove and Atlantic City. It is testified that it will accommodate the heavy traffic from the south—Washington and Maryland. At the intersection of East Avenue and the railroad are three tracks—one main and two sidings. The siding on the westerly side of the main track crosses the highway on a light curve, running in a northerly direction in the rear of the station building and freight house, located on the northwest corner of the crossing. About 200 feet west of the crossing is an additional siding track, terminating on the south side of East Avenue. On the northeast corner of the crossing is a large building, with a siding track along the west side of the building, terminating on the north side of East Avenue. With cars standing on the siding tracks, which is a continuous condition during the produce shipping season, the view at both approaches to the crossing would be limited. From the westerly side the view of southbound trains is also limited, on account of station and freight buildings.

The Woodstown school is located in the easterly portion of the borough, and the majority of school children attending school residing on the westerly side cross the tracks at East Avenue. It is stated by the Supervising Principal of the schools that four hundred and fifty-one children cross the tracks four times each day. Woodstown is the center of an agricultural community, and as East Avenue is one of the principal thoroughfares, there is considerable local travel over the crossing, in addition to the through travel. The Secretary of the Chamber of Commerce of the borough stated that the approximate number of teams over the crossing is an average of one hundred and fifty to two hundred per day. The station on the northwest corner of the crossing and the Farmers' Exchange Building and Creamery on the east side require the crossing and recrossing of the tracks by pedestrians and vehicles to and from these buildings.

Owing to the limited views, and extent of travel over the crossing, it is apparent that some means of protection should be afforded in addition to the grade crossing signs. The plan of pro-

Woodstown Chamber of Commerce v. West Jersey and Seashore R. R. Co.

tection suggested by the Superintendent of the Railroad Company is the construction of an overhead bridge for pedestrians, which plan does not provide any protection for vehicular traffic. The proposed bridge would be of standard height, twenty-two feet above the rail, and would be constructed on the southerly side of the open highway crossing. It cannot be assumed that children or other pedestrians would climb the necessary number of steps unless forced to do so by the erection of an intertrack fence, which is not feasible at the crossing. To erect an overhead bridge, with an open way to cross the tracks at grade at any point in the vicinity of the East Avenue crossing would, under the circumstances, undoubtedly be a useless attempt to improve conditions, as the use of the bridge would not be assured, owing to other and more convenient means of crossing at grade.

To provide reasonable protection at the crossing and apprise traffic on the highway of approaching trains, an audible, visible signal with automatic alarm bell should be installed, and track circuit so arranged that signal will operate for passenger train movements on both tracks; also drill movements on siding track west of the main track should be protected by a member of the crew stationed in the highway before movements are made across the highway.

An order requiring this will issue.

Dated September 17th, 1917.

ORDER.

This matter having been duly heard on notice, and the Board having on the date hereof made and filed a report containing its findings of fact and conclusions thereon, which report, by reference thereto herein, is made part hereof, and it appearing to the Board that East Avenue, in the Borough of Woodstown, is a public highway; that the said public highway crosses at the same level the tracks of the West Jersey and Seashore Railroad Company, and that it is necessary that provision for the protection of the traveling public at such crossing should be adopted, the Board of Public Utility Commissioners

In re Rules and Regulations—Commonwealth Water Company.

HEREBY ORDERS AND DIRECTS the West Jersey and Seashore Railroad Company to install at the said crossing an audible, visible signal with automatic alarm bell, and arrange the track circuit so that the signal will operate for passenger train movements on both tracks.

The Board FURTHER ORDERS AND DIRECTS the West Jersey and Seashore Railroad Company to have a member of the crew stationed in the highway to give warning of drill movements on siding track west of the main track before movements are made across the highway.

This order shall become effective October 10th, 1917.

Dated September 17th, 1917.

No. 464.

IN THE MATTER OF THE APPLICATION OF THE COMMONWEALTH WATER COMPANY TO SUSPEND THE GENERAL RULES AND REGULATIONS ADOPTED BY THE BOARD OF PUBLIC UTILITY COMMISSIONERS FEBRUARY 13TH AND FEBRUARY 19TH, CONCERNING WATER COMPANIES.

1. Municipal contracts and ordinances entered into without statutory authorization do not prevent the Board from fixing just and reasonable rates.

2. Since the passage of the act creating this Board and defining its powers, the power of municipalities to impose conditions upon utilities in the exercise of franchise grants, and to provide by contract respecting rates and service, is subject to the authority and control of the Board.

3. The request of the petitioner to be relieved of any part of the rules, regulations and practices adopted by the Board to be followed by utilities supplying water for public use is denied.

Adrian Riker and Carroll P. Bassett, for the company.

William Byrd and Walter R. Hine, for the Township of Millburn.

In re Rules and Regulations—Commonwealth Water Company.

S. D. Williams, for the Township of South Orange.

W. E. Turton, for the Town of Irvington.

Edward G. Pringle, for the City of Summit.

This Board, after due hearing, by its orders of February 13th, 1917, February 19th, 1917, and May 28th, 1917, ascertained and fixed general rules, regulations and practices to be observed by utilities supplying water for public use in this State.

On March 5th, 1917, the Commonwealth Water Company applied for an order to suspend these said regulations until a uniform system of rates could be decided upon and made effective throughout the territory served by it, not later than May 1st, 1918.

On March 7th the company was notified that pending investigation the Board would

"not regard the company as in default of compliance with its order, if it continues after the 14th of March its present practice, it being understood that if any complaint is made to the Board of the failure of the company to observe the rules, circumstances pertaining thereto shall be made the subject of special investigation."

The matter was then set down for hearing at Newark, April 25th, 1917, and the question there considered was whether the rules and regulations set forth in the orders referred to should be applicable in all respects to the Commonwealth Water Company without any changes in the existing schedule of rates and charges of such company.

To keep all facts clear in mind we note that on May 17th, 1916, the company filed an amended schedule of proposed rates which was disapproved by order of this Board November 20th, 1916, for reasons therein detailed at length.

On December 7th, 1916, the President of the Water Company wrote the Mayor and Council of Summit as follows:

"The action of the Public Utility Commissioners in declining to permit the adoption of the rate schedule filed by the Commonwealth Water Company in March last will interfere with the proposed reduction of water rents.

In re Rules and Regulations—Commonwealth Water Company.

"The Public Utility Commissioners have at present under consideration some general rules and regulations to be made applicable to all private water utilities in the state. Under these proposed rules and regulations we understand that some definite policy regarding the ownership and maintenance of meters and service pipes will be enunciated. We desire to inform you that as soon as these matters, which involve the expense of the individual supply, are settled, Commonwealth Water Company will file a new and amended schedule of rates, etc."

When, however, the rules and regulations referred to were promulgated, the company did not "file a new and amended schedule of rates" with this Board, but applied for a suspension of the said regulations.

On December 21st, 1916, the City of Summit requested this Board to institute an appropriate proceeding to determine fair and reasonable rates and rules for furnishing water and meters by the Commonwealth Water Company to private consumers; and especially for a determination of the value of the property of said company, tangible and intangible, used and useful in supplying water for the said city, considered as a unit. This application was renewed in the present hearing.

The Commonwealth Water Company now supplies Irvington, Summit, West Orange, New Providence and portions of the townships of Springfield, Millburn and South Orange. West Orange was excepted by the company from the schedule of rates which this Board failed to approve and the Town of Irvington protested against being included because of an existing contract previously referred to which does not expire until May 1st, 1918.

The company claims that by reason of these contracts, which in a manner deal with the rates to be charged for public or private consumption of water, and in some instances the costs of meter service, that nothing should be done by us until the expiration thereof.

The question naturally arises whether anything in the contracts above referred to made with the said municipalities is a bar to putting into effect, so far as the Commonwealth Water Company is concerned, the general rules and regulations adopted by this Board.

It has been repeatedly held in decisions of the United States Supreme Court that a municipality, in fixing rates is exercising a sovereign power which resides only in the State and that such

In re Rules and Regulations—Commonwealth Water Company.

a contract, whether in form of an agreement or ordinance, may be effective only until the State exercises its paramount right of fixing the rate. This Board has always taken the position that municipal contracts and ordinances entered into without statutory authorisation do not prevent this Board from fixing just and reasonable rates.

The contract with South Orange was made in September, 1911, which was after the passage of the act establishing this Commission. Since the passage of the acts creating this Board and defining its powers, the power of municipalities to impose conditions upon utilities in the exercise of franchise grants and to provide by contract respecting rates and service, is subject to the authority and control of this Board to fix just and reasonable rates.

The request of Summit is not unreasonable. Whenever it is possible we deem it advisable to have a valuation of the utility's properties made by our engineers and under our direction.

The investigations pending and unfinished before us at this time are such as to fully warrant the employment of the Board's present staff. While some assistance might be afforded in an investigation involving a valuation of the company's property, the Board could not in response to the request of the city conduct such investigation on its own initiative and assume responsibility for a valuation of the property without additions, especially for this purpose, to its present working force. The funds available now for use by the Board would not admit of this.

It is the policy of this Board to relieve municipalities as far as possible of the expense of making valuations, but in this instance and at this time, if a prompt determination is to be made, the city should assume the task of presenting the necessary testimony and proofs.

This Board has an appraisal of the properties of the Commonwealth Water Company as of January 1st, 1915, or thereabouts, which would be available to the city authorities or their representatives. This appraisal was made *ex parte*, and is not, therefore, conclusive upon any of the municipalities served.

If the City of Summit desires to proceed with an independent valuation, this Board will render every assistance possible and set

In re Rules and Regulations—Commonwealth Water Company.

the matter down for hearing as soon as the city is prepared to submit its proofs.

The Board will afford the same opportunity and furnish the same assistance in securing necessary information to the other municipalities involved.

There are admittedly complications in the matter before us but they are not insurmountable. They could be worked out by the co-operation of the municipalities and company, if there was an earnest effort to do so, but as there is not, we cannot deny Summit its right of an independent inquiry.

It may or may not be true that the valuation of property belonging to the water company beyond the city limits should in part be included in a valuation of the property used and useful in furnishing the water supply to that city. Such matters must be presented and developed in the hearings.

The question of sound judgment as to how much, if any, of the expense involved in the Millburn territory, where the main source of water supply exists, is to be charged against the different municipalities, necessarily arises, and the arbiter must be this Board.

The plea of unusual financial and industrial conditions brought about by the war with the necessary increased costs of labor and materials is no more of an excuse for this company than numerous others, to be relieved of its public duties.

Many of the water companies in the State are equally inconvenienced by the adoption of the general rules and regulations of their practices here discussed.

Several of them have the identical questions to contend with that are here mooted.

The request of the Commonwealth Water Company to be relieved of any part or portion of the rules, regulations and practices adopted by this Board to be followed by utilities supplying water for public use, must be denied.

Dated September 17th, 1917.

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No. 465.

CITY OF MILLVILLE

v.

WEST JERSEY AND SEASHORE RAILROAD COMPANY.

• IN RE PETITION FOR ADDITIONAL PROTECTION AT MAIN STREET
CROSSING, MILLVILLE.

1. Signs at a railroad grade crossing read "Do not cross while the bell rings." As the bell does not ring for all train movements, and crossing conditions warrant such protection, the system of operating the bell should be arranged so that it will ring automatically on the approach of all trains.

2. As the travel on the highway increases in the summer season and additional trains are operated during this period, it would appear also that to afford the necessary protection during the summer season, a flagman should be on duty at the crossing from June 1st to October 1st.

Louis H. Miller, for the complainant.

Walter H. Bacon, for the respondent.

The City of Millville, in its petition, sets forth that the grade crossing of the West Jersey and Seashore Railroad at Main Street, Millville, is not sufficiently protected, and alleges that the dangerous conditions at the crossing require additional protection for the safety of the traveling public. The company takes the position that the crossing conditions do not warrant additional protection. On the issue joined hearings were held, at which maps were produced showing location of obstructions and distances train movements can be observed at the crossing, also photographs and tables of travel over the crossing.

Main Street is one of the principal thoroughfares in Millville, running in an easterly and westerly direction near the southerly boundary line of the present built-up portion of the city. It is an improved highway, crossing the single main track diagonally, and

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statement submitted indicates considerable travel passing over the crossing continuously. The crossing is protected by grade crossing signs and manually controlled bell operated by a flagman stationed at Pine Street Crossing, 1,040 feet north of Main Street. A mechanical device in the tracks south of Main Street operates a bell located in the flagman's shanty at Pine Street when north-bound trains are approaching. When signal is given flagman starts the bell ringing before northbound trains reach Main Street crossing. A similar signal for southbound trains is not provided, as all trains stop at Millville Station north of Pine Street, and flagman has opportunity to observe movements approaching Pine Street. Owing to the large number of crossings within a comparatively short distance, and the limited views at the crossings on account of building lines near the track, the speed of trains through Millville is limited to ten miles per hour. Limited speed of train movements in addition to other means of protection at points where the views of trains are obstructed, although materially reducing the possibility of accident, cannot in all cases be considered full protection. The question, therefore, to be determined is whether the speed limit of ten miles an hour with manually controlled bell is sufficient to afford reasonable protection at the Main Street crossing.

From testimony of witnesses and photographs of conditions at the crossing, it appears that a garage on the northwest corner, trees and residence on the northeast corner, and a tool house on the southeast corner, are the principal obstructions at the crossing and materially affect the view of trains. The garage on the northwest corner is located at such a distance from the highway as to permit a fair view of southbound trains, if observations are taken by vehicular travel at a reasonable distance west of the crossing. Observing no southbound train passing the garage, travel would naturally proceed to cross without further precaution. If a train should be approaching and not be seen, because north of garage when observations were taken, the vehicle and the train, owing to crossing being diagonal, would approach the crossing at an angle. On the northeast corner, building and trees limit the view until the right of way line is reached. At the hearing, a statement was made by a representative of the railroad company

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that the tool house near the southeast corner could be removed, and the trees trimmed on the northeast corner. The removal of these obstructions would help the situation considerably.

The flagman at Pine Street is on duty from 6:00 A. M. to 7:00 P. M. only, and as trains are scheduled to pass over the crossing between 7:00 P. M. and 6:00 A. M., the crossing for the movement of these trains is without protection, except for the grade crossing signs. It is apparent that those accustomed to the ringing of the bell at the approach of trains could reasonably assume that such protection would be afforded for all train movements, and in the absence of the ringing of the bell, it would be considered safe to proceed. Signs at the crossing read "Do' Not Cross While the Bell Rings," denoting that, at all times, when the bell is not ringing, no train is approaching. As the bell does not ring for all train movements, and crossing conditions warrant such protection, the system of operating the bell should be arranged that it will automatically ring on the approach of all trains.

As some of the obstructions at the crossing are permanent and travel over the highway is continuous, it is obvious that to adequately protect the crossing, the bell should be automatically operated for all train movements; and as the travel on the highway increases in the summer season and additional trains are operated during this period, it would appear also that to afford the necessary protection during the summer season, a flagman should be on duty at the crossing from June 1st to October 1st.

An order requiring this will accordingly issue.

Dated September 17th, 1917.

ORDER.

This matter having been duly heard on notice, and the Board having on the date hereof made and filed a report containing its findings of fact and conclusions thereon, which report, by reference thereto herein, is made part hereof, and it appearing to the Board that Main Street, in the City of Millville, is a public highway; that the said public highway crosses at the same level the tracks of the West Jersey and Seashore Railroad Company, and

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that it is necessary that provision for the protection of the traveling public at such crossing should be adopted, the Board of Public Utility Commissioners

HEREBY ORDERS AND DIRECTS the West Jersey and Seashore Railroad Company to arrange its system for operating the warning bell at the said crossing so that such bell will ring automatically on the approach of all trains.

The Board FURTHER ORDERS AND DIRECTS, beginning with the year 1918, including said year and each year thereafter, from June 1st to October 1st, a flagman shall be stationed at the said crossing, each day in the week, during the hours passenger trains are operated over said crossing.

This order shall become effective October 10th, 1917.

Dated September 17th, 1917.

No. 466.

IN THE MATTER OF THE APPLICATION OF NEW JERSEY GAS AND
ELECTRIC COMPANY FOR APPROVAL OF NEW SCHEDULE.

Claim is made against proposed increases in rates that this Board is without authority to fix rates different from those set forth in a municipal ordinance.

1. The Board stated in the matter of rates of Wildwood Water Works Company (Vol. 2, Reports, page 447) and now reasserts that it "does not assent to this limitation of its powers either to fix rates or regulate service. Since the passage of the acts creating this Board and defining its powers, the power of municipalities to impose conditions upon public utilities in the exercise of franchise grants, and to provide by contract respecting rates and service, is subject to the authority and control of this Board to fix rates and regulate service." In the instant case as in the Wildwood case there is no claim of specific delegation of authority to the municipality to fix rates.

2. Claim of the petitioner that a public utility should be allowed rates to produce an immediate return of 6 per cent. on its capital stock issued under the Board's order of approval is not allowed.

In the reorganization of public utilities this Board is frequently called upon to ascertain a valuation of the property for the purpose of security issues. A reasonable ascertainment of value often contains some items upon which an immediate return in increased rates would not be allowed, but which are legitimately entitled to some return in the future development of the business.

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Hunt, Hill & Betts, for the petitioner.

King & Vogt, for the Town of Dover.

The petitioner was the purchaser at foreclosure sale of the property, rights and franchises of the Dover, Rockaway and Port Oram Gas Company, and is serving gas in the Town of Dover and Borough of Wharton. The company filed a new schedule of rates for service applying to all consumers in the territory served, as follows:

(a) For each one thousand cubic feet of gas sold to a consumer per month, \$1.35 with a discount of 10 cents per one thousand on the first 2,000 cubic feet; 15 cents per thousand on the third and fourth thousand cubic feet; 20 cents per thousand on the fifth, sixth and seventh thousand cubic feet; 25 cents per thousand on the eighth, ninth and tenth thousand cubic feet; 30 cents per thousand on the amount between 10,000 and 15,000 cubic feet, and 35 cents per thousand on all over 15,000 cubic feet, the above discounts being granted only in case of payment before the 15th of the month subsequent to the accrual of the charge.

(b) A minimum charge of \$1.35 per month to be made for each meter installed, said charge to apply on the cost of gas furnished during said month with a discount of 10 cents per month upon payment before the 15th of the month subsequent to the accrual of the charge.

(c) A rate of \$1.25 per thousand cubic feet of gas consumed to be charged on all prepayment meters.

The Town of Dover protests against the proposed new rates and maintains that, inasmuch as an ordinance entitled "To authorize the Dover, Rockaway & Port Oram Gas Company, subject to certain limitations, terms and conditions to construct, operate and maintain gas works and to lay and maintain pipes or conductors in the streets, alleys, bridges and squares in the Town of Dover for the distribution and sale of gas" passed March 13th, 1901, among other things provides, "from and after the time when said Gas Company shall manufacture and sell gas to the extent of 25,000,000 cubic feet per annum they shall furnish gas to customers within the Town of Dover at a price not to exceed \$1.00

New Jersey Gas and Electric Co.—Approval of New Schedule.

per thousand cubic feet," this Board is without authority to fix rates different from those set forth in the ordinance.

It is admitted by the company that it will produce and sell during the year 1917 more than 25,000,000 cubic feet of gas.

The Board stated in the matter of rates of the Wildwood Water Works Company (Vol. 2, Reports, p. 447) and now reasserts that it "does not assent to this limitation of its powers either to fix rates or regulate service. Since the passage of the acts creating this Board and defining its powers, the power of municipalities to impose conditions upon public utilities in the exercise of franchise grants, and to provide by contract respecting rates and service, is subject to the authority and control of this Board to fix rates and regulate service."

The New Jersey Supreme Court in *North Wildwood v. Board of Public Utility Commissioners*, 95 Atl. Rep. 749, held that

"Notwithstanding a contract between a municipality and a water company, prescribing rates to be charged private consumers, the Board of Public Utility Commissioners was acting within its jurisdiction in authorizing a higher rate, which was not unjust or unreasonably high, since the state, through a specially constituted agency, assented to the change in rate, and the state may waive contract rights to the public without impairing the obligation of contracts, in violation of the constitution."

The rule here laid down has been repeatedly approved by the courts and commissions.

The petitioner alleges that the present rate is unjust and insufficient to afford a fair return upon the property devoted to public use in the manufacture and distribution of gas.

When such applications are made to this Board it is one of its duties to ascertain the value of the property of the utility, and

"(c) After hearing, upon notice, by order in writing, to fix just and reasonable individual rates, joint rates, tolls, charges or schedules thereof, as well as commutation, mileage and other special rates which shall be imposed, observed and followed thereafter by any public utility as herein defined, whenever the Board shall determine any existing individual rate, joint rate, toll, charge or schedule thereof or commutation, mileage, or other special rate to be unjust, unreasonable, insufficient or unjustly discriminatory or preferential."

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The Board fixed the present physical value of the plant at \$180,000.00, and in addition allowed \$8,450.00 for the foreclosure expenses, and \$15,000.00 for materials, supplies and working capital in the capitalization of the company. New construction and extensions were approved to the amount of \$29,750.00, making a total capitalization for the purpose of issuing securities \$233,200.00. This Board, by its report dated May 2d, 1916, authorized the petitioner to issue \$75,000.00 capital stock and \$166,500.00 par value 6 per cent. bonds on the basis of the above capitalization.

The business done by the company in the years 1915 and 1916 set forth below shows its financial weakness.

	1915	1916
Gross revenue	\$22,823.39	\$28,561.07
*Revenue deductions	17,583.67	19,699.77
Gas operating income	\$5,239.72	\$8,861.30
Non-operating income	2,804.09	510.02
Gross income	\$8,043.81	\$9,371.32
Depreciation (annual)	4,000.00	4,000.00
	\$4,043.81	\$5,371.32

*Does not include depreciation.

The valuation of the physical property having been fixed at \$233,200.00, the gross income percentage of valuation for the year 1915 was 1.75 per cent. and for the year 1916 it was 2.30 per cent.

It is shown that the petitioner used 112,000 gallons of oil in 1916 and estimates that it will use 142,000 in 1917. This commodity has increased in cost from 4 cents a gallon in 1915 to 6.24 cents a gallon at present. The generator fuel, of which the petitioner used 516 tons in 1916, and estimates it will use 636 tons in 1917, has increased from \$4.00 a ton in 1915 to \$5.55 per ton in 1917. The petitioner also used 340 tons of boiler fuel in 1916 and estimates it will use 446 tons in 1917. This commodity has increased from \$3.07 per ton in 1915 to \$6.85 in 1917. The cost of labor has also increased about 30 per cent. over the cost in 1915. The result of this large increase in the cost of materials,

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supplies and labor has been that operating expenses of the plant which averaged 61 cents per thousand cubic feet of gas manufactured in 1915 increased to 82 cents per thousand for 1916. In this situation, and with the abnormal existing prices, a reduction in the price of gas from \$1.25 net per thousand cubic feet to \$1.00 per thousand cubic feet (a reduction in its gross income of 20 per cent.) would leave the company barely providing for the actual operating expenses at the plant and with a net income of about \$2,500.00 to meet interest on its bonds of \$9,990.00; interest on its notes \$600.00; taxes (estimated) \$2,000.00, a total of \$12,590.00, without any return on its capital stock and no allowance for depreciation. Such a financial situation would be ruinous to the company and destroy its usefulness as a utility.

From the proofs submitted it appears that some adjustment must be made in the schedule of rates to be charged by this company.

The return on the invested capital at \$1.00 per thousand cubic feet is clearly insufficient and while we will not approve the schedule submitted we have formulated what we deem to be just and reasonable rates under all facts and conditions.

We do not agree with the claim of the petitioner that a public utility should be allowed rates to produce an immediate return of 6 per cent. on its capital stock issued under our order of approval. The return on the investment may reasonably be affected by legal or equitable considerations. In the reorganization of public utilities this Board is frequently called upon to ascertain a valuation of the property for the purpose of security issues. This is always a difficult task and a reasonable ascertainment of value often contains some items upon which an immediate return in increased rates would not be allowed, but which are legitimately entitled to some return in the future development of the business.

A company may lawfully and properly waive a full return on its investment. It is only where it is demonstrated, as in the present case, that an existing unreasonable and insufficient rate, which has been fairly tried for a sufficient length of time to demonstrate its insufficiency, results in such financial embarrassment as to affect the service the company is obligated to render, are we inclined to modify the rate.

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“While this Board has the power to fix rates and establish rules and practices governing service without regard to ordinance provisions or contracts between municipalities and utilities, we would not feel disposed to exercise such power to relieve a utility from the burden assumed by such ordinance or contract in any case where it appeared that a municipality or its inhabitants would under such ordinances or contract receive rates or service more advantageous than this Board would be justified in ordering, unless it appeared that such ordinance or contract imposed terms involving such loss and hardship as to make it impossible for the company to render safe, adequate and proper service. A company may agree to give rates and service upon terms that will not accord to its stockholders a fair return upon the capital invested. We would not be disposed to permit an increase of rates in any case where an agreement between a municipality and a utility exists, if the only benefit from such increase of rates is an increase of dividends. In such case the company would be presumed to have acted with a knowledge that its earnings would be reduced by such terms and to be willing to wait for adequate returns upon the investment. When, however, the effect of ordinance or agreement provisions is to impair service, such provisions will not be permitted to stand in the way of such order as this board deems necessary.” *Wildwood Water Works Company, Ibid.*

In the instant case, as in the Wildwood case, there is no claim of specific delegation of authority to the municipality to fix rates.

The rates in effect under the conditions present in the year 1916 do not return the company more than 2.3 per cent. on the value of the physical property. This is insufficient to enable the company to pay interest on its bonds, and returns no dividends on its capital stock. The percentage of return of valuation for the year 1915 was 1.75 per cent. In the year 1916 it was 2.3 per cent. The average number of consumers in the year 1915 was 1,325. The number in 1916 was 1,500. The revenue from gas sales in 1915 was \$22,723.00, and in the year 1916 \$27,829.00, and it is estimated will reach \$35,973.00 in 1917. These figures show that the plant is growing rapidly and when the present abnormal prices for both labor and materials subside (fuel has already dropped considerably in price) with good management,

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the rates hereinafter prescribed should in the long run enable the company to fulfill its public duty and finance extensions as they become necessary.

The Board is of opinion that the institution of a minimum charge of \$1.35 per month, with 10 cents off for prompt payment, is not only unreasonable but exorbitant, and hereby fixes as reasonable a minimum charge of 50 cents per month.

After deliberation and the investigation of all the facts submitted, we find and determine just and reasonable rates to be fixed for this company are as follows:

\$1.25 for first 3,000 cubic feet; \$1.20 for next 4,000 cubic feet; \$1.15 for next 8,000 cubic feet; \$1.05 for next 25,000 cubic feet, and 95 cents for all in excess of 40,000 cubic feet. 10 cents per thousand discount on all bills paid before the 15th of the succeeding month.

For all gas furnished through prepayment meters, \$1.25 per thousand cubic feet.

A minimum charge of 50 cents per month.

We are of opinion that the foregoing schedule of rates should be given a full trial to ascertain its effects.

An order will issue fixing the rates of the New Jersey Gas and Electric Company as herein set forth for all customers, including those residing in the Town of Dover, until the further order of this Board.

Dated September 18th, 1917.

ORDER.

This application having been duly heard, and full investigation of the matters and things involved having been had, and the Board having, on the date hereof, made and filed a report containing its findings of fact and conclusions thereon, which said report is hereby referred to and made a part hereof,

The Board of Public Utility Commissioners HEREBY ORDERS that from and after the effective date of this order, the following shall be the charges for gas by the New Jersey Gas and Electric Company:

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\$1.25 for first 3,000 cubic feet;
 \$1.20 for next 4,000 cubic feet;
 \$1.15 for next 8,000 cubic feet;
 \$1.05 for next 25,000 cubic feet;
 95 cents for all in excess of 40,000 cubic feet;
 10 cents per thousand discount on all bills paid before the 15th
 of the succeeding month;
 \$1.25 per thousand cubic feet for all gas furnished through pre-
 payment meters;
 A minimum charge of 50 cents per month.
 This order shall become effective October 10th, 1917.
 Dated September 18th, 1917.

No. 467.

IN THE MATTER OF THE CITY OF LONG BRANCH V. TINTERN
MANOR WATER COMPANY.

Complaint is made by the City of Long Branch of the rates charged by the Tintern Manor Water Company. *Held—*

1. In determining the reasonableness of the rates charged in Long Branch city consideration must be given to the value of the entire property; the value of that portion required for service in the city; the financial results to the company, considering its entire business; the financial operating results, considering its business in the city, and the classification of revenues as compared with a proper classification of expenses.

2. The right to a return upon an investment depends upon the use of proper judgment in expenditures, both in the construction of a plant and its operation.

3. The exact results to a water company under any given state of facts may not necessarily determine the justice and reasonableness of the rates charged. Charges must not exceed the value of the service.

4. From an analysis of the value of the company's property and earnings it appears that the gross revenues collected from the territory as a whole have not been excessive or unreasonable.

5. Separating the territory supplied by the old Long Branch Water-Supply Company from the rest of the territory and assuming a plant adequate to serve this segregated territory, the company under this assumption would not have received excessive or unreasonable returns.

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6. Assuming the property to be segregated and considering only the territory supplied by the old Long Branch Water Company, but assuming further that the Tintern Manor Water Company supplied all the service to the Borough of Deal the revenues would not have been excessive or unreasonable.

7. Segregating the property so as to consider the City of Long Branch by itself and charging to Long Branch its proper share of the Tintern Manor plant, and comparing the results which might have been obtained from a supplemented plant at West End the gross revenues and net results to the company have not been sufficient and would not have been sufficient under the assumed changes to justify the charge that the revenue collected by the company was excessive and unreasonable in amount.

8. While a low rate may be allowed to a large consumer all service should be in accordance with a regular schedule of rates so arranged as to admit of universal application.

9. A railroad company may not be treated as one customer for the aggregate of service supplied in two municipalities; each service must be considered as that of a separate customer and be charged in accordance with the schedule.

William A. Stevens and *Wilbur A. Heisley*, for the complainant.

Edmund Wilson and *Clement K. Corbin*, for the company.

On February 26th, 1916, the City of Long Branch filed with the Board a petition, alleging that the rates and schedules and rules and regulations of the Tintern Manor Water Company were excessive, improper and unreasonable. The company's answer denied the allegations of the petitioner and the matter was first set down for hearing on June 7th, 1916. Hearings were continued from time to time in order that data might be prepared for proper presentation and the final hearing took place April 2d, 1917.

HISTORY OF THE COMPANY.

Prior to 1901, Long Branch, Monmouth Beach and Sea Bright were furnished with water by the Long Branch Water Supply Company, which water was taken from Whale Pond Brook, flowing through the city in sufficient volume to maintain several small lakes, now known as Takanassee Lake.

The Tintern Manor Water Company is the successor, by merger and consolidation, of the Long Branch Water Supply Company, Middletown Water Company, Deal Water Company, and Sea Bright Water Supply Company. The Long Branch Water

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Supply Company was organized November 3d, 1882, the declared object of the company being to supply with water "the Township of Ocean and the seaside resorts of Long Branch, Monmouth Beach, and Sea Bright, and the places adjoining thereto." The only one of the places so mentioned then incorporated was Long Branch.

Attached to the company's articles of incorporation was the formal joint consent of the municipality of Long Branch and of Ocean Township to the incorporation by the individuals mentioned in the certificate for the purpose above mentioned, and to the laying of water mains throughout the territory mentioned and operating its works therein. The language of the consents is full and ample. No terms were imposed.

The territory of Ocean Township, covered by this certificate, is about nine miles in length on the seashore and varies in width from less than one-half a mile to upwards of two miles, being bordered on the northwest side for about five miles by the Shrewsbury River and Pleasure Bay. At the southeastern end, at Elberon and Deal, it extends several miles into the interior. The Long Branch Commission covers about one-half a mile of the southeastern part of the ocean front of this tract.

The Middletown Water Company was organized July 1st, 1901, to supply the territory now known as Eatontown.

The Deal Water Company was organized March 16th, 1898, for the purpose of supplying that portion of Ocean Township now known as Deal Beach.

The Sea Bright Water Supply Company was organized December 8th, 1887, to supply that portion of the territory extending northward from the city limits of Long Branch. All of the above named companies consolidated August 6th, 1901, forming the Tintern Manor Water Company.

It does not appear that the Middletown Water Company ever constructed any plant. The Sea Bright Water Supply Company constructed a small system supplying a portion of Sea Bright. The Deal Water Company, on May 30th, 1898, took over from the Atlantic Coast Realty Company a complete water system, occupying the northerly half of the Borough of Deal, and later, in the same year, extended its mains throughout all the streets in the southern half of the Borough. April 14th, 1899, the Atlantic

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Coast Realty Company deeded all of the streets to the Borough of Deal, reserving, however, all rights previously granted by the realty company to the Deal Water Company. These rights were exclusive, notwithstanding which, however, another company later on paralleled all of the mains of the Deal company.

The Long Branch Water Supply Company proceeded to supply the territory mentioned and took its supply from the Whale Pond Brook, a stream rising in the interior and running toward the coast and emptying into the ocean in about the middle of the Long Branch Commission and about one and a half miles southerly from the center of the old village of Long Branch. The water is taken from a point about half a mile from the mouth of the stream at the coast. At the latter point the company established a pumping station and a standpipe about eighty feet high. The standpipe has since been removed. The mains were laid throughout Long Branch; thence northeast along the beach to North Long Branch, Monmouth Beach, Galilee, Low Moor, and Sea Bright, a distance of at least six miles. It also laid its mains southwest through Elberon and southeast as rapidly as the population demanded. In response to such demand, the company added more mains of greater size and apparently kept up well to the demands of its patrons and always served them, so far as appears, with entire satisfaction.

September 21st, 1891, the company entered into a written contract with the municipality of Long Branch, to continue for ten years. By that contract the municipality gave the water company the exclusive right to furnish water for municipal purposes, also the right to extend mains throughout any portion of the streets of the municipality and agreed to pay \$4,000 a year for the municipal supply, including street sprinkling and hydrant service for hydrants then in use, with an additional charge of \$40 a year for each hydrant thereafter added. The water company agreed to pay an annual tax of \$250 a year, and to furnish, at all times, a complete and adequate supply of water.

The municipality further granted to the water company the exclusive privilege of furnishing water for private use to the residents of the community upon condition that the rates charged for the use of water should not exceed the rates charged at the date of

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the contract, reserving the right to the water company to supply water to any premises through a meter at 20 cents per thousand gallons. In point of fact, there never was any scale of charges for unmeasured water established or enforced by the Long Branch Water Supply Company until June 1st, 1902, and a great inequality and lack of uniformity arose from the absence of such an established scale. Few, if any, meters were introduced and none for ordinary domestic purposes. So great was this inequality of charges that before the attempt to establish rates on June 1st, 1902, many private consumers were receiving for \$10 a year a supply of water for which others were paying \$40 per year. It was the attempt to adjust this inequality by raising the charges of those who had been served at a low rate which formed one of the causes of the complaint of *Hicks v. Long Branch Water Supply Company* and of the later complaint of the *Long Branch Commission v. Tintern Manor Water Company*.

In the meantime the growth of the population in the territory covered by the articles of association had grown from about 6,000 in 1880, including 4,000 for Long Branch, to over 14,000 in the year 1900, including 9,000 for Long Branch, and the use of water had increased in a greater proportion. Such greater proportion was due to the increasing use of water for bathing, lawn sprinkling and street sprinkling. The result was that the water company found that in a very dry season its demand for several days was fully equal to the entire supply and it took into consideration plans for increasing such supply.

Quoting from the decision of Justice Pitney (*N. J. Eq.*, Vol. 70, p. 71, *Sq.*):

"Now this, I conceive it to be well settled, was their undoubted duty. It was so declared by Mr. Justice Van Syckel, speaking for the Court of Errors and Appeals, in *Olmstead v. Proprietors of the Morris Aqueduct*, 47 *N. J. Law* (18 *Vr.*) 311 (at p. 329).

"A company which seeks and obtains a franchise to supply a certain territory with water for public and domestic uses is under a moral, and, in my judgment, a legal, obligation to furnish a supply which shall be equal to all emergencies which may be reasonably anticipated, including unusual drouths and unusual conflagrations, and to bear constantly in mind the prospective increase in population and a consequent increased demand for water. The evidence taken herein, in September, 1905, showed that the Takanassee supply in the immediately preceding summer was entirely inadequate, and fully justified the necessity for some action on the part of the defendant company.

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"The problem thus presented to the old company was not easy of solution. They could have built a reservoir to store the waters of Whale Pond Brook above Takanassee, which would have prolonged their supply, according to Mr. Sherrerd, upon whose opinion I place great reliance, for about ten years. But the contour of the earth presented no favorable location for such a reservoir. It would consist mainly of very shallow water, which is not desirable for storage purposes, and Mr. Sherrerd's approval of the plan I thought, and still think, was not very hearty.

"Its cost would have been about \$220,000, and at the end of ten years, and I think sooner, as the evidence indicated, an insufficiency, would still have arisen.

"But, in addition to all that, the supply at Takanassee was not central. It was six miles away from Sea Bright, the northeasterly end of the territory, and the mains already laid for that populous resort were already worked to their full capacity, after having been once more than duplicated. So that, properly to supply Sea Bright, would have required the laying of several miles of new mains.

"Then, at the end of ten years, it was said that a supplemental supply could have been found by sinking, in Long Branch city, artesian wells a few hundred feet in depth to tap the now well-known layer of water-bearing gravel existing along the shore, precisely as predicted by Professor Cook many years ago, and from which several towns in Monmouth County derive their supply. But I am not able to say that I think this bed of water-bearing gravel, which seems to be a continuous one, has been so far tested or explored as to render it certain that its storage capacity will stand an unlimited draft upon it, for it must be borne in mind that it is a mere storage reservoir, receiving its supply of water from rain falling on an outcrop in Monmouth County some miles inland from the seashore, and its storage capacity is undoubtedly limited. It appears that it has been tapped by a private individual in the City of Long Branch and water drawn therefrom.

"This, however, can hardly be considered as a complete test of the reliability of the storage at that point.

"And if a plant had been established in the northerly part of Long Branch, depending upon this subterranean supply, it would have required, in order to make it available, the establishment and continuous maintenance of a complete additional pumping station, and would have required two pumping stations constantly in operation, thereby in some respects doubling the expense."

The newly organized Tintern Manor Water Company fixed upon the Swimming River, which has a much larger watershed, probably ten times larger than the Whale Pond Brook, as the source of supply, and constructed a dam just west of the Tinton Falls-Lincroft road, and installed a pumping plant about half a mile away, between that point and the Town of Red Bank.

A 36-inch transmission line was then laid from the new pumping station eastwardly and southeasterly through Little Silver and

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Oceanport about six miles, to the westerly suburbs of Long Branch, and there connected with the old Long Branch system. In addition, a branch main was laid northeastwardly along Rumson Neck to Sea Bright, at that point connecting with the northern end of the old Long Branch system. The connection with the old Long Branch system in the northern part of Long Branch proved to be inadequate and insufficient in size and a large main was therefore installed southwardly along the westward border of Long Branch.

In the complaint filed in the Court of Chancery by the Long Branch Commission, in 1905, the general claim was made and confirmed by the court's decision, that the new plant at Swimming River, together with the transmission lines, was too large for the present customers but was amply sufficient to provide for a long period in the future and the determination in the earlier case shows that so far as Long Branch was concerned, the water company did not have the right to burden the people of Long Branch with the support of a system built so far in excess of their needs.

CAUSE OF THE PRESENT COMPLAINT.

The present complaint arises from a feeling on the part of the citizens of Long Branch that the rates now charged by the Tintern Manor Water Company are too high and the cause of the excessive rates is due to the necessity, on the part of the company, of carrying the very large investment involved in the new Tintern Manor plant at Swimming River. Their contention is largely based upon the allegations that although the population of Long Branch has not increased to any great extent, the revenues of the water company have steadily increased and complainants point to this great increase as indicating an increasing and unreasonable burden upon the citizens of Long Branch.

SOLUTION OF THE PROBLEM.

In arriving at proper conclusions as to the justice and reasonableness of the rates charged for water supply supplied in Long Branch City, there are a number of matters to be taken into consideration.

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- (1) The valuation of the entire property.
- (2) The valuation of that portion of the property required for the service of the City of Long Branch.
- (3) The financial operating results to the company considering its entire business.
- (4) The financial operating results to the company considering only its business in the City of Long Branch.
- (5) The classification of revenues as compared with a proper classification of expenses.

In determining the pertinent facts in this case, certain difficulties are presented which have not arisen in prior cases concerning rates charged by the larger water companies in this State. In two important rate cases previously presented to this Board, all customers were served through meters and definite information was obtainable with regard to amount of service required by different classes of customers. In the case before us only a small proportion of the customers are served through meters, the great majority being served on a flat or fixture rate basis, which may or may not be equitable in all cases. The Tintern Manor Water Company has a fixture rate schedule for a great proportion of its customers, a sliding scale meter rate schedule for hotels, boarding houses, stables and some other large customers, and a special rate for water furnished the railroads. The complaint of the city calls attention to this special rate, alleging that it constitutes an unjust discrimination in favor of the railroads and against the city.

VALUATION.

Physical Property.

Detailed inventory and appraisal has been made of all the property of the company in accordance with the Board's system of accounts and further classified with reference to its location in the various municipalities. A still further classification has been made with a view to showing the amount of property in the territory included in the charter of the old Long Branch Water Supply

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Company. The inventory and appraisal presented to the Board is the joint product of engineers representing the Commission, the water company and the municipality, insofar as cost to reproduce the property new is concerned. The Board's engineer held an opinion differing from those of the other engineers with regard to the method of computing the accrued depreciation and a report presented to the Board, giving the valuation of the property (Exhibit C-1) contains results of calculating the depreciation in accordance with both the straight line and sinking fund methods.

Table I. gives the summary of the entire tangible property with the accrued depreciation on a 5 per cent. sinking fund basis.

Table II. gives the summary of the entire property of the company with the accrued depreciation calculated on a straight line basis.

Table III. gives the valuation of all property now located in the territory served by the old Long Branch Water Supply Company.

Table IV. gives the summary of the valuation of all property actually located in the City of Long Branch, but including also the mains lying along the boundary streets on the west side of the city.

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TABLE I.—TINTERN MANOR WATER COMPANY—REF. 335-1-2.
Summary of Property, All Divisions, Accrued Depreciation on 5 Per Cent. Sinking Fund Basis.

Acc.	Ref.	ITEM.	Net Cost.	Addition.		Cost to Re-produce.	Years.			Depreciation.		Present Value of Structures.
				%	Amount.		Ref.	Av. Age.	Life.	%	Amount.	
107	2	Reservoir—Newman Springs	\$121,476	22.5	\$27,332	\$148,808	5	13.0	75	2.35	\$3,497	\$145,311
....	3	Reservoir—West End	8,481	22.5	1,908	10,389	5	24.0	75	5.88	611	9,776
112	5	Gravity intakes	132,866	19	25,245	158,111	5	13.0	60	5.01	\$4,108	150,190
115	4	Coagulating basin	1,038	17	339	2,207	5	9.0	15	51.1	1,158	1,109
117	3	Filters—Newman Springs buildings	10,425	22.5	2,346	12,771	5	13.0	60	5.01	\$640	12,131
....	3	Filters—Newman Springs equipment	48,753	22.5	10,969	59,722	5	13.0	50	8.46	5,052	54,670
....	2	Filters—West End building and equipment	37,642	22.5	8,470	46,112	5	25.7	60	14.47	6,872	39,440
130	1	Clear water basin	10,825	22.5	2,458	13,383	5	12.5	60	4.70	\$12,364	12,746
121	1	Pumping station building—West End	12,969	19	2,464	15,433	5	31.5	60	20.65	\$3,187	12,246
....	3	Pumping station building—Newman Springs	25,648	19	4,873	30,521	5	12.0	60	4.50	1,373	29,148
122	6	Steam power pump, equipment—West End	32,351	18.5	5,985	38,336	5	19.5	40	26.33	\$10,094	28,242
....	4	Steam power pump, equipment—Newman Springs	73,202	18.5	13,542	86,744	5	13.0	35	19.61	17,010	69,734
129	11	2" distribution mains and accessories	1,475	16.5	243	1,718	5	12.0	25	83.35	\$573	1,145
....	11	4" distribution mains and accessories	37,408	16.5	6,172	43,580	5	20.18	40	28.17	12,276	31,304
....	11	6" distribution mains and accessories	845,831	16.5	131,562	985,393	5	16.8	60	7.1885	70,835	914,558
131	2	Meters	12,763	8.5	1,085	13,848	5	4.0	25	9.08	\$83,684	12,968
132	1	Hydrants	21,360	9	1,821	23,261	5	12.0	40	13.18	\$1,250	20,986
134	1	General structure	11,600	12	1,880	12,880	5	20.0	50	15.79	2,034	10,846
135	1	General equipment	3,938	10	394	4,332	....	....	....	....	....	4,332
1	1	Land and right of way—all accounts	\$1,450,931	....	\$268,678	\$1,707,609	....	....	....	8.66	\$147,886	\$1,559,723
....	....	Total tangible fixed capital	....	....	....	137,562	....	....	....	....	....	137,562
152	1	Material and supplies	\$1,845,171	\$1,867,285
....	Total tangible capital	9,149	9,149
....	\$1,894,820	\$1,708,434

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TABLE II.

TINTERN MANOR WATER COMPANY—REF. 335-1-6.

Summary of Property in All Divisions—Accrued Depreciation to July 1st, 1916, on Straight Line Basis.

Ac.	Page.	ITEM.	Cost to Re- produce.	Age, p. 1-6.	Est. Life.	Accrued Depreciation.		Present Value, 7-1-1916.
						%	Amount.	
107	1	Newman reservoir	\$148,808	13	150	8.7	\$12,046	.....
107	3	West End reservoir	10,889	24	100	24.	2,403	.....
112	5	Gravity intakes at Newman Springs	158,111	13	100	13.	20,554	.....
115	5	Coagulating basin at Newman Springs	2,267	9	15	60.	1,360	.....
117	3	Filter buildings—Newman Springs	12,771	13	100	13.	1,660	.....
117	3	Filter equipment—Newman Springs	59,722	13	50	26.	15,528	.....
117	2	Filter equipment—West End	9,362	25.7	100	25.7	2,406	.....
117	2	Filter equipment—West End	36,750	25.7	50	51.4	18,890	.....
120	1	Clear water basin—Newman Springs	13,363	12.5	100	12.5	1,673	.....
121	3	Pumping station building—Newman Springs	30,521	12	100	12.	3,663	.....
121	1	Pumping station building—West End	15,433	31.5	100	31.5	4,961	.....
122	4	Steam power pumping equipment—Newman Springs	86,744	13.0	40	32.5	28,192	.....
122	6	Steam power pumping equipment—West End	38,336	19.5	40	48.7	18,670	.....
129	11	2" mains and accessories	1,718	12.0	35	34.3	593	.....
129	11	4" mains and accessories	43,580	18.4	68.7	27.6	12,028	.....
129	11	6" and larger mains and accessories	985,308	15.4	100	15.4	151,751	.....
131	2	Meters	13,849	4.0	40	10.0	1,386	.....
132	1	Hydrants	23,261	12.0	50	24.	5,563	.....
134	1	General structures	12,880	20.0	50	40.	5,152	.....
136	1	General equipment	4,352	.....	15*	.....	.....	.....
.....	.....	Total structures	\$1,707,609	15.	83.1	18.1	\$306,385	\$1,398,224
.....	.....	Land and rights of way—all accounts	137,662	.....	.....	.....	.....	137,662
.....	.....	Total tangible fixed capital	\$1,845,171	.....	.....	.....	.....	\$1,535,786
152	1	Material and supplies	9,149	.....	.....	.....	.....	9,149
.....	.....	Total tangible capital	\$1,854,320	.....	.....	.....	.....	\$1,544,935

* Remaining life—\$4,352 represents present value—Average age probably 5 years.

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TABLE III.

TINTERN MANOR WATER COMPANY—REF. 335-1-3.

Summary of Property in Territory Served by Long Branch Water-Supply Company (Prior to 1903)—Accrued Depreciation Computed on 5 Per Cent. Sinking Fund Basis. Includes All Property Now Located in Deal Borough, Monmouth Beach, Long Branch, Ocean Township, Sea Bright and West Long Branch.

Acc. No.	ITEM.	Ref.	Land Right or Way.	Net Cost, Structures.	Addition.		Cost to Re-produce.	Years.			Depreciation.		Present Value.
					%	Amount.		Ref.	Age.	Life.	%	Amount.	
106	1 Reservoirs		\$19,530		20	\$2,907	\$17,443	1-2					\$17,443
107	3 Reservoirs		12,050		20	3,810	22,860	and					22,860
117	2 Filters		9,525	\$8,481	22.5	1,908	10,389		24	75	5.98	\$611	9,778
121	1 Pumping station building		9,525	37,642	22.5	8,470	11,430		25.7	60	14.47	6,672	11,430
122	6 Pumping station equipment			12,969	19	2,464	15,433		31.5	60	20.65	3,187	11,430
129	70 Mains—Deal, Monmouth Beach, 2"			32,351	18.5	5,985	38,336		19.5	40	26.33	10,064	12,246
130	70 Sea Bright, Long Branch, 4"			1,510	16.5	240	1,750	89	12	25	33.35	587	1,172
130	70 Ocean Twp. and West Long Branch, 6" and over			30,560	16.5	5,042	35,602	89		40	34.5	12,283	23,319
	Right-of-way—West Long Branch			409,824	16.5	67,588	477,212	80		60	8.90	42,901	434,311
	Meters		600		20.0	120	720						720
131	1 Long Branch total plus 50% balance			9,897	8.5	1,612	11,509						10,470
132	3 Hydrants			15,900	9.0	1,436	17,336		4.0	25	9.03	1,059	15,103
134	1 General structures—buildings			11,500	12.0	1,380	12,880		20	50	13.79	2,034	10,846
134	Pipe yard at Sea Bright		2,000		20	400	2,400						2,400
135	1 General equipment (80% of total)			3,150	10	315	3,465						3,465
	Totals		\$55,238	\$73,644	17.1	\$107,496	\$736,376					\$81,701	\$554,675

Materials and supplies not included.

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TABLE IV.

TINTERN MANOR WATER COMPANY-REF. 335-1-4.

Summary of Property Located in City of Long Branch Except as Noted (See * † ‡)—Accrued Depreciation Computed on 5 Per Cent. Sinking Fund Basis.

Acc. No.	Sheet No.	ITEM AND DESCRIPTION.	Net Cost.		Addition.		Cost to Re-produce.	Years.		Depreciation.		Present Value.
			Land and Right of Way.		%	Amount.		Age.	Life.	%	Amount.	
106	1	Reservoirs	\$14,536		20	\$2,907	\$17,443			(5% Sinking Fund Basis)	\$17,443	
107	3	Reservoirs	19,050		20	3,810	22,860				22,860	
107	3	Reservoirs		\$8,481	22.5	1,908	10,389	24	75	5.88	\$611	9,778
117	2	Filters	9,525		20	1,905	11,430					11,430
117	2	Filter beds and equipment		37,642	22.5	8,470	46,112	25.7	60	14.47	6,672	39,440
121	1	Pumping station buildings	9,525		20	1,905	11,430					11,430
121	1	Pumping station buildings		12,960	19	2,464	15,423	31.5	60	20.65	3,187	12,246
122	5 & 6	Steam power pumping equipment		32,361	18.5	5,985	38,346	19.5	40	29.33	10,004	28,242
129	3	Mains		212,207	16.5	35,014	247,221			9.00	22,240	224,972
130	64	Mains along border†		38,732	16.5	6,391	45,123		60	9.00	4,061	41,062
131	2	Meters		7,031	8.5	578	7,609		25	9.03	689	6,940
132	1	Hydrants		10,850	9.0	977	11,827		40	13.18	1,559	10,268
134	1	General structures—buildings		11,500	12	1,380	12,880	20	50	15.79	2,034	10,846
135	2	General equipment (80% of total)†		3,150	10	315	3,465					3,465
129	10	Right-of-way—West Long Branch.....	600		20	120	720					720
Total			\$53,236	\$74,913		\$74,149	\$507,298				\$51,156	\$451,142

Material and supplies not allocated.

* 2"—25 years; 4"—40 years; 6" and over—60 years.

† Would probably require 80% to operate plant.

‡ Mains just outside of city limits, serving Long Branch.

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TABLE V.

TINTERN MANOR WATER COMPANY—REF. 335-1-7.

Summary of Property in Territory Served by Long Branch Water-Supply Company (Prior to 1903) with Certain Deductions and Additions as Indicated Below; Accrued Depreciation to July 1st, 1916, on Straight Line Basis, Includes Property Located in Deal Borough, Monmouth Beach, Long Branch, Ocean Township, Sea Bright, and West Long Branch.

Ref. Ac.	ITEM.	Cost to Re-produce.	Age, 1-5	Est. Life.	Accrued Depreciation.		Present Value, 7-1-1916.
					%	Amount.	
107	3	Reservoir—West End	24	100	24	\$2,403	.....
117	2	Filter building—West End	25.7	100	25.7	2,406	.....
121	1	Filter equipment—West End	25.7	50	51.4	18,800	.....
121	1	Pumping station building—West End	31.5	100	31.5	4,861	.....
122	6	Pumping station equipment—West End	19.5	40	46.7	18,670	.....
126	70	Mains and accessories—2"	1.759	35	34.3	603	.....
126	70	Mains and accessories—4"	35,602	21.4	32.1	11,428	.....
126	70	Mains and accessories—6" and over	477,212	18.7	18.7	89,289	.....
131	1	Meters—Long Branch plus 50% balance	11,569	12.0	30.0	3,463	.....
132	3	Hydrants	17,396	12.0	50	4,175	.....
134	1	General structures	12,880	50.0	24.0	5,152	.....
135	1	General equipment—80% total	3,465	life	40.0	.....	.....
.....	.....	Total structures in place	.....	15	.....	\$101,370	\$508,723
129	74	Deduct for excess cost of mains 18" and larger in line to Newman Springs and Deal over cost of main 8" of same	79,870	18.7	18.7	14,037	.....
122	9	Add 3 MGD pump and piling originally at West End	\$590,214	.....	.....	\$146,433	\$433,781
.....	.....	Total structures	7,371	40	75	5,528	.....
1	3	Add land and right of way—all accounts	\$507,515	.....	25	\$151,961	\$145,634
.....	.....	Total tangible fixed capital	66,283	.....	.....	.....	66,283
162	1	Material and supplies—80% total	\$663,688	22.9	\$511,907
.....	Total property	7,319	7,319
.....	Total property	\$671,187	\$310,226

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It has been alleged by the city that the population of the city had not increased and that, therefore, the plant as it existed in 1903 should now be sufficient to supply the present City of Long Branch and that the plant at Swimming River should never have been constructed.

As a basis for considering this contention, Table V. has been made up, which shows the value at the present time of the property in the territory of the old Long Branch Water Supply Company, excepting that it has been assumed that the machinery formerly located in the Long Branch pumping plant has been restored to that plant and it has been further assumed that in the boundary line streets on the west side of Long Branch City, where is now found a very large main, an 8-inch main would be found in place. The results shown by these tables will be referred to hereafter. It should be noted that they refer exclusively to the value of physical property and show the cost to reproduce that property new with deductions for accrued depreciation. Unit prices in every case are based upon averages over a long period of years and do not, in any way, reflect the present high prices of materials and labor. The basis for these prices have all been agreed to by the various engineers representing the Commission, the water company, and the Municipality of Long Branch.

Working Capital, Etc.

In addition to the physical property referred to in the schedules found in Tables I. to V., an allowance will have to be made for working capital. Concerning working capital, we have only the testimony of Mr. Weston E. Fuller, who, testifying for the company, stated, in his opinion, an allowance of \$40,000 should be made. His opinion was not challenged. Supporting this is the proof by the manager of the company, Mr. LaMonte, that during the past three years the company has been obliged to borrow annually to meet current expenses, approximately \$35,000. This is due to the fact that the business of the company is largely seasonal. The amount of working capital required by a given company will depend upon the total amount of business done, the methods of collecting, whether monthly, quarterly or annually, the character of the business done, whether seasonal with a high season peak

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or uniform throughout the year. It will depend also upon whether the bills are collectible in advance or at the end of the period during which service is furnished. Where a water company furnishes service through meters, bills are not collectible until after service is rendered. In the case of companies having few metered customers, the bills are made upon a fixture or estimated basis and are usually payable in advance. Owing to the fact that the Tintern Manor Water Company has few meters, most of its income is received, to a large extent, in advance.

It may well be that a company is required to borrow money in order to finance its operations, but this fact alone is not clear evidence that an allowance of working capital should be made. Where bills are payable entirely in advance at the beginning of the year, the money required to operate the company for the year is deposited to the credit of the company and may be actually increased, due to interest on bank balances.

The total revenue of the company for the year ending June 1st, 1916, is given by the company as \$151,359. Of this amount, \$92,665 was payable annually in advance at the beginning of the year; \$27,841 was due from metered private service and was not collectible until a month after the end of the quarter for which the bill would be rendered, where rendered quarterly. The municipal service amounts to \$15,013. The schools amount to \$16,026 and the railroads \$14,057. All of the latter amounts are payable, of course, after service is rendered. It is clear, however, that the sum of \$92,665 was due and payable and should have been in the company's hands within two months after the beginning of the company's service year. Adjustments of these amounts are made in subsequent tables in order to conform to investigations made by the Board's inspectors. The balance, amounting to approximately \$58,694, was not actually payable to the company until at least one month after service had been rendered. Calculation has been made to ascertain the net result to the company in connection with its present rules for collecting its bills. This calculation indicates that less than \$1,000 would be sufficient, in addition to the moneys paid in advance by customers, to finance the company's operations. This is, of course, irrespective of interest which the company pays in connection with loans. An allowance of \$10,000 will be made for working capital. This, it should be noted, is in addition to

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that part of the working capital which is now represented by materials and supplies, an allowance for which is found in Tables I. to V.

Reference has been heretofore made to difference between the opinion of the Board's engineer and the opinions of the other engineers with reference to the method of calculating accrued depreciation. The Board's engineer testified that in his opinion the final result to the company was not greatly different, no matter how accrued depreciation was calculated. Sheet No. 14 of Acc. 494 in Exhibit C-1 is a computation to show the exact comparison between the two methods of computing the depreciation.

In Tables I. and II. above the cost to reproduce tang-

ible property as of July 1st, 1916, is stated as.....	\$1,845,171
Full theoretical accrued depreciation.....	309,385

Leaving a present value on this basis of.....	\$1,535,786
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If the annual interest charged is computed at 7 per cent., we have.....	\$107,505
Annual depreciation on straight line basis.....	24,248

Total annual charge.....	\$131,753
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With the same basis of value new the accrued depreciation on a 5 per cent. sinking fund basis amounts to..	\$147,886
leaving a present value of.....	\$1,697,285

7 per cent. interest on the above gives.....	\$118,810
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Adding the annual allowance for depreciation on the corresponding 5 per cent. compound interest basis..	\$16,222
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we have a total annual charge of.....	\$135,032
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The difference between the two methods is, therefore seen to be.....	\$3,279
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which is the excess of the total annual charge when depreciation is calculated on the compound interest basis over the total annual charge when the depreciation is calculated on the straight line basis.

The same lives were used in estimating both the accrued and annual depreciation by each of the methods indicated above. The lives used by the Board's engineers, however, in estimating depre-

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ciation on the straight line basis were longer than those used by the company's engineer in estimating the accrued depreciation on a 5 per cent. sinking fund basis and the annual depreciation on a 5 per cent. compound interest basis.

A comparison of Tables I. and II. will show the difference in the lives used. If the lives estimated by the company's engineer were used in computing depreciation on the straight line basis, the "total annual charge" on this basis would be slightly more and the difference between the annual allowances by the two methods correspondingly less.

The Board has, therefore, accepted the method of calculating the depreciation on the straight line basis, with the lives as estimated by the Board's engineers, which gives a present value for the physical elements of property, not including working capital or materials and supplies, of \$1,535,786, or inclusive of materials and supplies, \$1,544,935. Adding \$10,000 for working capital gives a total of \$1,554,935.

Valuation—Intangibles.

Allowance for intangible value must always be considered; their allowance will depend upon the circumstances in each particular case. Much testimony was submitted by the company showing accumulated deficits running over a long period of years. The pertinence of this testimony was denied by the counsel for the City of Long Branch, on the ground that unwise expenditures had been made by the company, both in regard to the construction of the new plant at Newman Springs and with regard to the size of the new plant and the transmission mains. Counsel for the city contended that if there had been an accumulated deficit of magnitude that this deficit was due to causes beyond the control of the city and because of poor judgment on the part of the officials of the company and should not now be considered as a claim against the consumers of water in Long Branch.

The fact that a plant was built larger than was needed at the time was brought out in the complaint of the city against the water company in 1905, and in that case the court determined that the City of Long Branch should pay rates only upon a certain portion of the plant. The wisdom of that decision is clear. If the officials of a utility company knew that it would always be

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allowed to make up all back deficits, no matter how incurred, the incentive to the use of proper judgment in expenditures for construction would be lost. The right to a reasonable return upon an investment depends upon the exercise of good judgment, both in the construction of a plant and its operation.

Mr. Weston E. Fuller, in his testimony concerning accumulated deficits, divides the history of the company into two periods: the period from 1883 to 1902, and the period from 1903 to 1916 (see Exhibit R-19). Mr. Fuller's estimates for the total cost of preliminary investigation and organization and development cost, due to deficits in earlier years, etc., is variously stated at \$1,096,528, \$1,160,000, \$1,310,000 and \$1,130,000, depending upon some variations in his methods of computing losses. These estimates, however, were based on a 7 per cent. return and at least one of them is based upon present excessive cost of labor and material. No estimates for the above items were submitted by any other witness.

The company, in its brief, lays stress upon the allowances made by this Board in the so-called "Passaic Gas Case," where 30 per cent. was allowed in the structural cost as an allowance for all the various elements of intangible costs. This included costs of obtaining franchises, charters, preliminary investigations, preliminary engineering, deficits in operation and lack of profits in the earlier years and unearned depreciation. In the Board's opinion, as expressed in more recent cases, notably the New Jersey Gas and Hackensack Water cases, such allowances must be based upon the facts confronting the particular company under consideration, but in no case should they exceed, in total, some reasonable relation to the investment in the tangible property.

But, for the purposes of this report, it will not be necessary to determine the value of the intangible property of the respondent. In what follows we will deal only with the tangible property of the company, omitting even working cash, as above determined, to meet the views of the petitioners.

As bases of value in these calculations, then, we will assume:

(1) Cost to reproduce new tangible property, July 1st, 1916, \$1,855,000.

(2) Present value, July 1st, 1916, of tangible property (depreciated on straight line basis), \$1,545,000.

Long Branch v. Tintern Manor Water Co.

TABLE VI.
NET OPERATING REVENUE—1911 TO 1916.
Calendar Years. Based on Annual Reports, Adjusted.

	1911.*	1912.	1913.	1914.	1915.	1916.
Metered private service	\$5,174.02	\$28,450.28	\$38,734.66	\$40,690.96	\$40,506.31	\$44,970.80
Unmetered private service	108,057.13	92,727.34	89,089.74	91,021.72	92,154.40	94,738.04
Service to other water systems			4,007.38	252.95	84.67	.....
Municipal water service	10,867.12	10,754.72	14,400.69	16,006.10	16,964.01	17,727.37
Miscellaneous water service	481.50	212.00	218.62	525.90	126.22	22.00
Other operating revenues	1,301.19	1,729.03	416.28	150.28	207.19	291.47
Total operating revenues	\$126,310.06	\$133,882.37	\$147,867.37	\$140,795.90	\$150,131.80	\$157,740.37
Water collecting expenses			506.00	463.33	624.82	643.90
Purification expenses	5,177.53	5,340.77	5,595.16	6,146.20	6,230.07	7,702.51
Pumping expenses	17,508.35	17,128.76	17,751.56	18,873.05	16,771.05	19,707.80
Distribution expenses	777.24	921.93	420.23	568.73	560.84	720.50
Maintenance expenses*	27,038.80	28,707.44	28,680.58	27,575.52	26,125.03	26,908.01
Administration and accounting	5,550.16	6,220.05	7,375.20	9,022.46	9,981.10	9,870.13
Other general expenses	2,480.98	3,138.77	2,283.56	3,117.40	2,358.43	7,221.45
Taxes	6,690.80	7,428.79	9,028.90	10,528.44	11,347.16	12,074.47
Uncollectible water bills	363.14	336.30	.....	260.43	530.51	580.74
Total revenue deductions	\$98,062.06	\$99,280.81	\$71,650.28	\$77,425.56	\$76,547.01	\$85,013.78
Net operating revenue	60,308.90	64,592.56	76,207.09	72,370.34	73,584.79	72,736.00

*Adjusted to include depreciation on straight line basis.

 Long Branch v. Tintern Manor Water Co.

Earnings and Expenses.

A table has been prepared showing the actual financial results to the company due to the operation of its system during the six years from 1911 to 1916, inclusive. This is given as Table VI., on page 20 (figures are for the calendar years in each instance).

Table VI. shows the net operating revenue in each of the six years from 1911 to 1916, and Table VII. shows the percentage which the net operating revenue in each of the years bears to each of the two bases referred to; that is, \$1,855,000 and \$1,545,000. The additions to the company's property during this period have not been large enough to materially affect the accuracy of the percentages given below:

TABLE VII.

NET REVENUE IN RATIO TO THE TWO BASES ASSUMED (NO INTANGIBLE PROPERTY IS INCLUDED HEREIN).

	1911	1912	1913
Net revenue—			
Basis \$1,855,000	3.25	3.48	4.11
Basis \$1,545,000	3.90	4.18	4.93
	• 1914	1915	1916
Net revenue—			
Basis \$1,855,000	3.90	3.97	3.89
Basis \$1,545,000	4.68	4.76	4.67

From Table VII. it will be seen that the net rate of return on the basis of minimum depreciated tangible value found above has at no time exceeded 4.76%. All this has not been available, however, for the payment of interest on outstanding bonds, as the company, from year to year, has been carrying deficits which involved large interest payments, in addition to interest paid on bonds.

Before concluding, however, that the above financial statement is a definite indication of the fairness of the present rates, some consideration must be given to the amount of business done by this company in the various portions of the territory supplied.

In the Borough of Deal, which the Tintern Manor Water Company has completely piped, we find the New Jersey Water & Light Company with a system of mains completely paralleling those of the Tintern Manor Water Company.

Long Branch v. Tintern Manor Water Co.

In the Borough of Rumson we find also that a small portion of the mains of the Tintern Manor Water Company is paralleled by those of another company. Investigation shows, however, that the competition in Rumson is practically negligible in its effect on the revenues of the Tintern Manor Water Company.

Let us assume that the Borough of Red Bank, which now owns and operates its own water system, purchases water at wholesale rates from the Tintern Manor Water Company; the rate is assumed at \$100 per million gallons. Table VIII. has been made up to show the results to the Tintern Manor Water Company if it received all of the money paid for water service in Deal and received, also, payment for water sold to the Borough of Red Bank for the supply of that borough. The assumed operating expenses have been adjusted to include the cost of additional fuel and coagulant. In order that the Tintern Manor plant might supply all of the service in Deal, and, at the same time furnish all of the water required by Red Bank, it might be necessary to increase the capacity of the filters and the building housing the same, at the Newman Springs plant, but we have assumed no increases to the plant for the purposes of the following calculation:

Long Branch v. Tintern Manor Water Co.

TABLE VIII.
CALENDAR YEARS. BASED ON ANNUAL REPORTS, ADJUSTED.

	1911.	1912.	1913.	1914.	1915.	1916.
Metered private service	\$5,174.02	\$28,450.28	\$39,030.55	\$41,317.90	\$41,010.21	\$45,526.30
Unmetered private service	113,051.07	98,425.22	94,965.38	98,002.22	96,771.92	100,786.81
Service to other water systems	11,750.00	12,671.13	17,010.55	14,219.65	14,010.15	14,500.00
Municipal water service	13,117.12	13,398.05	17,050.07	18,610.88	19,618.01	20,374.80
Miscellaneous water service	481.00	212.00	218.02	525.90	126.22	37.00
Other operating revenue	1,301.19	1,720.03	416.28	189.28	227.19	416.47
Total operating revenues	\$145,475.40	\$154,884.71	\$169,298.05	\$172,955.83	\$171,763.70	\$181,500.88
Water collecting expenses			506.00	463.33	624.82	643.99
Purification expenses	5,377.49	6,127.54	6,308.03	7,171.92	7,256.03	9,078.35
Pumping expenses	19,210.72	18,032.43	19,410.93	20,748.03	18,460.03	21,797.46
Distribution expenses	777.24	921.03	420.28	568.73	560.84	720.59
Maintenance expenses*	27,038.86	28,767.44	28,680.58	27,575.52	28,125.03	26,908.01
Administration and accounting	5,550.16	6,220.05	7,375.20	9,892.46	9,981.10	9,876.13
Other general expenses	2,486.98	3,136.77	2,283.56	3,117.40	2,358.43	7,221.45
Taxes	6,609.80	7,428.79	9,028.90	10,528.44	11,347.16	12,074.47
Uncollectible water bills	363.14	538.30		260.43	580.51	550.74
Total revenue deductions	\$67,964.30	\$71,571.25	\$74,222.52	\$80,328.26	\$79,270.95	\$88,899.19
Net operating revenue	77,511.01	83,313.46	95,075.53	92,627.57	92,492.75	92,601.69

* Adjusted to include depreciation on straight line basis.

TABLE IX.
NET OPERATING REVENUE IN PERCENTAGE OF CAPITAL BASIS ASSUMED.

	1911.	1912.	1913.	1914.	1915.	1916.
Return on basis of \$1,855,000.	4.18	4.49	5.13	4.90	4.89	5.00
Return on basis of \$1,545,000.	5.02	5.80	6.15	6.00	5.90	6.00

Long Branch v. Tintern Manor Water Co.

Long Branch Water Supply District Considered By Itself.

In the old complaint of the Long Branch Commission v. Tintern Manor Water Company, it was contended by the city that the company had built a plant far in excess of the needs of the district then supplied. This contention was confirmed by the court in its final decision, and deductions were made from the value of the total property to obtain a basis of value for plant required to supply the territory of the old company. The same contention with regard to excess capacity is made by the complainants at this time. As the rates charged have been the same since June 1st, 1903, the correctness of this contention is best determined by comparison of the gross revenues from ordinary consumers with the amount of water pumped for their use.

Mr. Sherrerd, testifying for the City of Long Branch, states that, although the plant was considerably in excess of the needs as it was constructed in 1903, today the amount of reserve capacity now found in the plant is no greater than he would himself provide if he were designing the plant at this time.

Water Pumpage Data.

Table X. is a chart showing the maximum, minimum and average water pumped for a number of years; it also gives the same information for the four summer months and the eight winter months.

An inspection of this chart reveals the fact that the maximum for several years preceding 1903 was practically constant. This was undoubtedly due to the fact that all the water furnished by the Whale Pond Brook supply was being pumped into the mains, but that the demand for water was not being fully met. This interpretation is corroborated by officials of the company and indicated the necessity of an additional supply, even prior to 1903. Another pertinent fact revealed is the magnitude of the summer maxima compared with the yearly average. This indicates that a very much larger plant is required to meet this peak load than would be required to meet a normal average of a non-seasonal population. It will be further noticed that there is a winter sub-

Long Branch v. Tintern Manor Water Co.

peak, if the term be allowable, which seems to be placed in the winter minimum each year. It is very probable that this is caused by the fact that fixture rate customers let their faucets run in winter weather to prevent freezing of pipes. This is more apt to be done by flat rate customers than by metered ones.

Tables XI. to XIV. are charts showing the daily pumpage curves on dates indicated; they also furnish information concerning the pumps actually used to supply the demand; from these charts it will be seen that there is no great margin of spare capacity when a pumpage of 18,000,000 gallons an hour is approached, which has already happened in dry years. They also indicate that additional capacity would have to be provided if all the water for Deal and for Red Bank were supplied from Newman Springs. The real demand upon the plant has, at times, exceeded the capacity of the pumps and filters at Newman Springs. The total demand in twenty-four hours has been met, up to this time, by filters now installed, but at times of maximum demand it has been necessary to make use of filters at both pumping plants.



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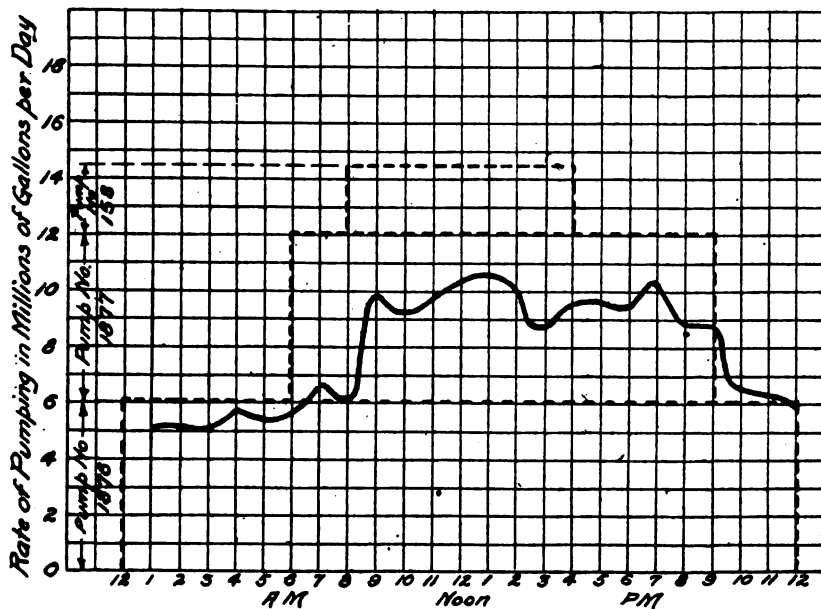
Long Branch v. Tintern Manor Water Co.

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CHART NO. XI.
Pumping Load and Equipment in use July 8th, 1916

Pump No	Location	Capacity	Started	Stopped	Hours in Use
1877	Newman Springs	6 M.G.D.			24
1878	Newman Springs	6 M.G.D.	6.00 A.M.	9.00 P.M.	15
158	West End	2.5 M.G.D.	8.00 A.M.	4.00 P.M.	8

Dotted lines show capacity of pumps in operation.



Long Branch r. Tintern Manor Water Co.

CHART NO. XII

STATE OF NEW JERSEY

BOARD OF PUBLIC UTILITY COMMISSIONERS

COMPANY: Tintern Manor Water DIVISION: All

COMPUTER: J.N.V.

APP'D BY: H.E.C. 6-22-17

File No. 336

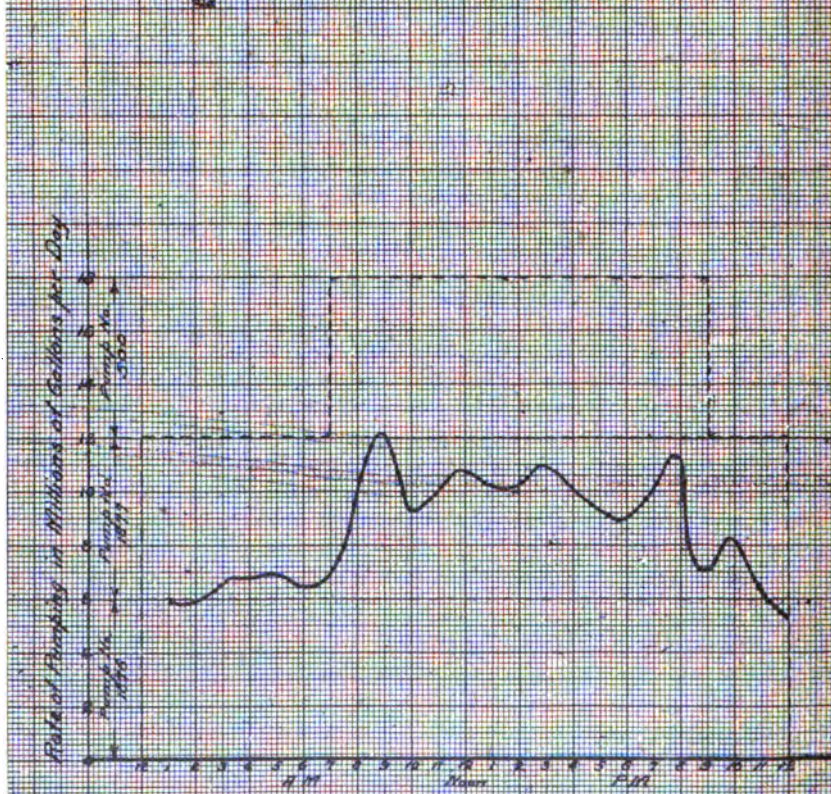
Acc. No. 1

SUBJECT: Pumping Load & Equip. in use Aug. 7, 1916,

Sheet No. 509

Pump No.	Location	Equipment Used		Stopped	Hours in use
		Capacity	Started		
1876	Newman Springs	6 M.G.D.			24
1877	Newman Springs	6 M.G.D.			24
500	East End	6 M.G.D.	7.00 A.M.	9.00 A.M.	14

Dotted line shows total capacity of pumps in operation.



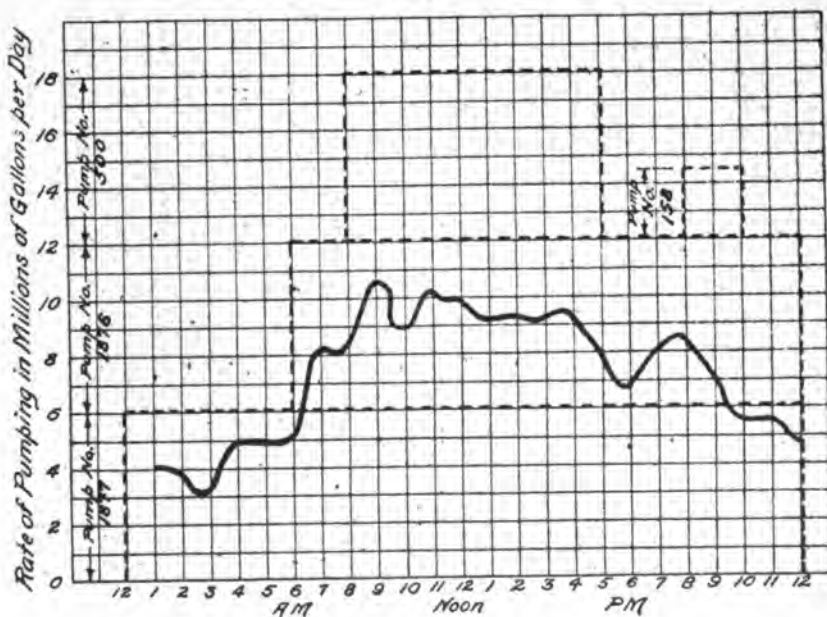
Long Branch v. Tintern Manor Water Co.

State of New Jersey
Board of Public Utility Commissioners
The City of Long Branch vs Tintern Manor Water Co.

CHART NO. XIII
Pumping Load and Equipment in use Aug 18th. 1916

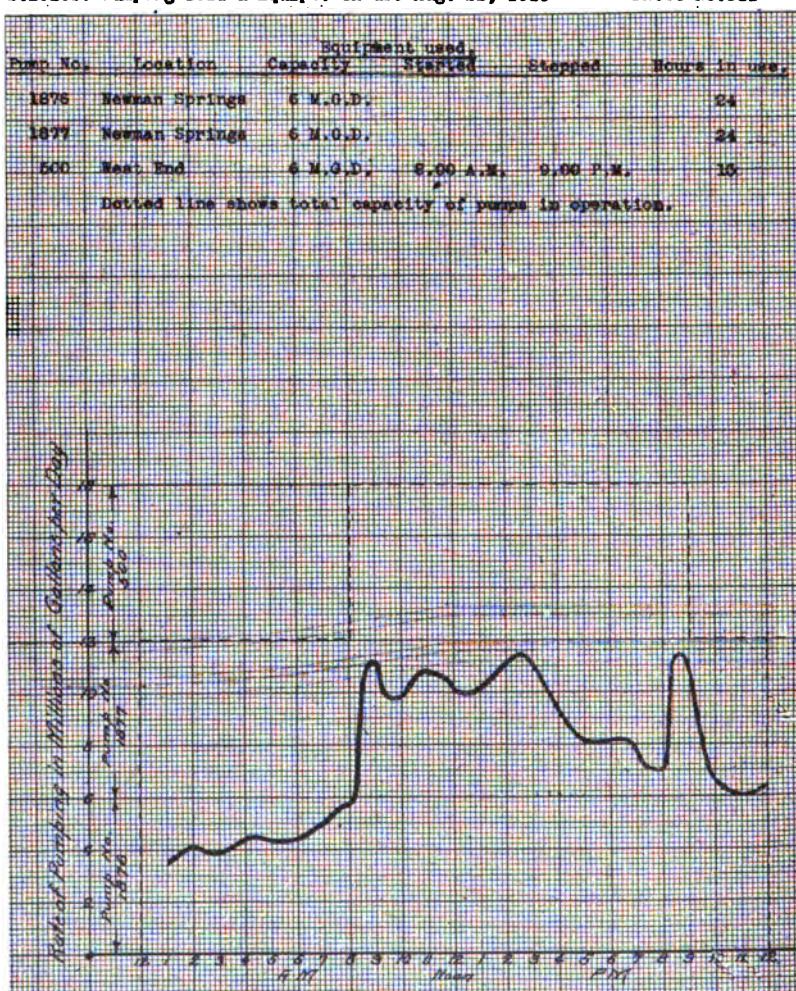
Pump No	Location	Capacity	Started	Stopped	Hours in Use
1877	Newman Springs	6 M.G.D.			24
1876	Newman Springs	6 M.G.D.	6.00 A.M.		18
500	West End	6 M.G.D.	8.00 A.M.	5.00 P.M.	9
158	West End	2.5 M.G.D.	8.09 A.M.	10.0 P.M.	2

Dotted lines show capacity of pumps in operation.



Long Branch v. Tintern Manor Water Co.

CHART NO XIV

STATE OF NEW JERSEY
BOARD OF PUBLIC UTILITY COMMISSIONERSCOMPANY: Tintern Manor Water DIVISION: ALL
COMPUTER J.N.V. APPROVED BY: J.N.V. 6-22-17
SUBJECT: Pumping Load & Equip. in use Aug. 22, 1918File No. 335
Acc. No. 1
Sheet No. 311

Long Branch v. Tintern Manor Water Co.

Allocation With Respect to the Old and the New Districts.

It now becomes necessary to consider a separation of capital, depreciation, operating expenses and taxes between the old Long Branch Water Supply District and the New District, so called, consisting of the territory subsequently added by the Tintern Manor Water Company (Township of Eatontown, the Boroughs of Rumson and Fairhaven, the Township of Shrewsbury and a portion of the Town of Red Bank). Statistics for the year ending May 31st, 1916, are used throughout.

It is evident that the use of water is one of the principal means to be used in such an allocation. We will, therefore, take up this subject first.

Water Used and Water Wasted and Lost by Leaks.

The water delivered to the force mains of the Tintern Manor Water Company for the year ending May 31st, 1916, after allowing for slip in pumps and for water used for washing filters and other plant purposes, was approximately 1,443,700,000 gallons. We allocate this water as follows:

	<i>1,000 Gallons.</i>	<i>% of All.</i>
Metered water used by railroads.....	141,625	9.81
Metered water other than above.....	119,694	8.29
Total water actually measured.....	261,319	18.10
Water used for sprinkling.....	63,000	4.36
Water used by hydrants	14,760	1.02
Water used by flat-rate customers.....	634,221	43.93
Subtotal	973,300	67.41
Leaks in mains.....	368,000	25.50
Plumbing leakage and waste.....	102,400	7.09
Total	1,443,700	100.00

The basis for the above allocation is as follows:

Water used by meters is determined, of course, by actual measurement. All other items are based on estimates.

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Water used for sprinkling: Exhibit R-25 indicates that the consumption of water per cart per month varied from 405,000 gallons to 517,000 gallons by actual measurement. We take an average of 450,000 gallons; the rental being \$40 per cart per month gives a rate of \$0.089 per 1,000 gallons drawn from mains. The revenue derived from sprinkling in each municipality or district divided by \$0.089 indicates the 1,000 gallons used. Water used for sprinkling county roads is pro rated in proportion to other water, totaled.

Water used by hydrants: Estimated at 35,000 gallons each, except flushing hydrants, estimated at 10,000 gallons each.

Plumbing leakage and water not registered by meters: Estimated at one per cent. of consumption for railroad meters and 11,000 gallons per tap for other meters.

Waste and plumbing leakage and waste on premises of flat or fixture rate customers is estimated at 25,750 gallons per tap.

Water lost through leaks and breaks in distribution mains is estimated at 89 gallons per inch foot of main per year. The location of the main determines to what municipality this leakage is to be charged.

Water lost through leakage on transmission mains is estimated at 50 gallons per inch foot per year, and is allocated by use of main.

The sum of the water so estimated and metered is deducted from the total of 1,443,700,000 gallons delivered to the mains; the remainder, or 634,221,000 gallons, is taken to represent the water *used* by fixture rate customers. The revenue of \$92,503 (excluding private hydrants transferred to hydrant revenue) divided by this amount of water gives a selling price of 14.585c. for water *used*. The fixture rate revenue in each municipality or district, divided by this 14.585c. will indicate the water used in such municipality or district to which is to be added leakage and waste as subsequently allocated.

Excluding leakage of transmission mains, then, we can determine the water used in each district or municipality by taking the total of the water used by metered and fixture rate customers, by hydrants and sprinkling carts, to which is added the water needed to make good the losses through plumbing leaks and waste

Long Branch v. Tintern Manor Water Co.

and leaks on distribution mains. Reducing each total to a percentage of all, we can allocate transmission leakage by charging the leakage on same to all water from each municipality, which may go through or use any particular section. The leakage of transmission mains for each municipality or district thus determined, added to the previously determined totals for each district or municipality, will give the total amount of water required to supply each location.

The result of the allocation for water in the method above indicated is shown in the following Table XV. in 1,000 gallons and in percentage of 1,443,736 M. G. (1,443,736,000).

TABLE XV.

SUMMARY OF WATER DELIVERED TO MAINS.

(A) In 1,000 gallons.

<i>Class of Service.</i>	<i>L. B. W. S. District M. Gals.</i>	<i>New District M. Gals.</i>	<i>Company Total M. Gals.</i>
Private and municipal buildings, etc.—			
Metered	140,764	27,034	167,798
Unmetered M. Gals.	838,750	172,900	1,011,650
Sub-total metered	979,514	199,934	1,179,448
Sprinkling	71,553	13,150	84,703
Hydrants	15,389	5,411	20,800
	1,066,456	218,495	1,284,951
Railroad use, metered	128,270	30,515	158,785
Total water to mains.....	1,194,726	249,010	1,443,736

(B) In percentage of all water delivered.

Private and municipal buildings, etc.—			
Metered	9.750	1.872	11.622
Unmetered	58.096	11.976	70.072
Sub-total	67.846	13.848	81.694
Sprinkling	4.956	0.912	5.868
Hydrants	1.066	0.374	1.440
Sub-total	73.868	15.134	89.002
Railroad use, metered	8.884	2.114	10.998
Total water to mains.....	82.752	17.248	100.000

Long Branch v. Tintern Manor Water Co.

Allocation of Capital Used and Useful.

The capital used in the collection, purification and pumping systems is apportioned to the various municipalities and districts in ratio to water chargeable to that municipality or district as found in Table XV-(B).

Mains. It is assumed that all mains six inches and upwards in diameter are two inches larger than necessary for all purposes other than for fire protection; the latter requires both volume and pressure. The difference in cost is allocated to hydrants. The remainder is allocated in proportion to water supplied.

Meters and hydrants are allocated to the districts in which found, an inventory of each having been made by location.

Other items are then allocated in accordance with the weighted average of the before recited capital allocated to municipalities or districts for each class of service.

Table XVI. shows, in percentage, the allocation of capital as made. (See following pages.)

Depreciation and Taxes.

These are both allocated in ratio to property.

Operating Expenses.

With a few exceptions, these are allocated practically in the same way as the corresponding capital.

Table XVII. following shows expenses as adjusted.

Table XVIII. shows allocation of operating expenses and taxes, exclusive of depreciation.

Table XIX. shows the allocation of annual depreciation.

Long Branch v. Tintern Manor Water Co.

TABLE XVI.

 ALLOCATION OF CAPITAL TO DISTRICTS AND CLASSES OF SERVICES IN PER CENT.
OF TOTAL.

	Private and Municipal Buildings.							
	Metered.	Unmetered.	Sub-total.	Sprinkling.	Hydrants.	Sub-total.	Railroad use.	Total.
Collection, purification and pumping—								
Long Branch W. S. district	3.92	23.30	27.31	1.90	0.43	29.73	3.58	33.31
New district	0.75	4.82	5.57	0.37	0.15	6.09	0.85	6.94
Total	4.67	28.21	32.88	2.36	0.58	35.82	4.43	40.25
Transmission mains (joint)—								
Long Branch W. S. district	2.29	17.04	19.33	1.41	3.68	24.42	1.93	26.35
New district	0.27	2.35	2.62	0.18	0.56	3.36	0.40	3.76
Total	2.56	19.39	21.95	1.59	4.24	27.78	2.33	30.11
Distribution and local transmission mains—								
Long Branch W. S. district	2.07	12.34	14.41	1.06	5.52	20.99	0.63	21.62
New district	0.35	2.21	2.56	0.17	1.07	3.80	0.15	3.95
Total	2.42	14.55	16.97	1.23	6.59	24.79	0.78	25.57
Meters—								
Long Branch W. S. district	0.55	.....	0.55	.....	.....	0.55	0.05	0.60
New district	0.12	.....	0.12	.....	.....	0.12	0.02	0.14
Total	0.67	.....	0.67	.....	.....	0.67	0.07	0.74
Hydrants—								
Long Branch W. S. district	.....	.....	.....	.....	0.93	0.93	.....	0.93
New district	.....	.....	.....	.....	0.32	0.32	.....	0.32
Total	.....	.....	.....	.....	1.25	1.25	.....	1.25
General structures—								
Long Branch W. S. district	0.13	0.37	0.50	0.04	0.08	0.62	0.06	0.68
New district	0.02	0.08	0.10	0.01	0.02	0.13	0.01	0.14
Total	0.15	0.45	0.60	0.05	0.10	0.75	0.07	0.82
General equipment—								
Long Branch W. S. district	0.03	0.12	0.15	0.01	0.02	0.18	0.01	0.19
New district	0.01	0.02	0.03	.....	.....	0.03	0.01	0.04
Total	0.04	0.14	0.18	0.01	0.02	0.21	0.02	0.23
Materials and supplies—								
Long Branch W. S. district	0.09	0.21	0.30	0.02	0.04	0.36	0.03	0.39
New district	0.01	0.06	0.07	0.02	0.09	0.01	0.10
Total	0.10	0.27	0.37	0.02	0.06	0.45	0.04	0.49

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Working capital—								
Long Branch W. S. district	0.22	0.22	0.05	0.06	0.33	0.10	0.43
New district	0.04	0.04	0.02	0.02	0.03	0.03	0.11
Total	0.26	.....	0.26	0.07	0.06	0.41	0.13	0.54
Grand totals—								
Long Branch W. S. district	9.26	53.49	62.75	4.59	10.79	78.13	6.38	84.51
New district	1.58	9.55	11.13	0.73	2.15	14.01	1.48	15.49
Total	10.84	63.04	73.88	5.32	12.94	92.14	7.86	100.00

Discrepancies in last decimal disregarded.

TABLE XVII.

DERIVATION OF OPERATION EXPENSES FOR FISCAL YEAR OF COMPANY ENDING
JUNE 1ST, 1916—FROM ANNUAL REPORTS.

Acc. No.	ITEMS.	1915.	1916.	Average.	Adjustment.	Taken.
401.	Collection system	\$624.82	\$643.99	\$634.40	.....	\$634.00
402.	Purification system	6,230.07	7,792.51	7,011.29	.....	7,012.00
403.	Pumping system—					
	(a) Op. labor	\$5,770.79	\$6,329.15	\$6,049.97	.....	\$6,050.00
	(b) Fuel	9,830.86	12,193.05	11,011.95	.....	11,011.00
	(c) Misc. supplies and exp.	1,169.40	1,275.80	1,222.55	.....	1,222.00
	Total	\$16,771.05	\$19,797.89	\$18,284.47	.....	\$18,283.00
404.	Distribution expenses	\$569.84	\$720.59	\$645.21	+ \$30.00	\$675.00
	Repairs of—					
405.	Collection system .....	.....	250.00	125.00	.....	125.00
406.	Purification system	1,452.99	273.18	863.09	.....	863.00
407.	Pumping system	1,236.07	979.37	1,107.72	.....	1,108.00
408.	Distribution system	1,023.58	1,003.69	1,013.64	.....	1,014.00
409.	General repairs	164.39	151.77	158.07	.....	158.00
	Total repairs	\$3,877.03	\$2,658.01	\$3,267.52	.....	\$3,268.00
411.	Administration	\$4,904.45	\$4,900.80	\$4,902.62	.....	\$4,903.00
412.	Acctg. and comm. (Sal., $\frac{3}{4}$; suppl., $\frac{1}{4}$)	5,076.65	4,975.33	5,025.99	.....	5,026.00
414.	Legal	1,000.00	2,071.85	1,535.93	—\$285.93	1,250.00
416.	Insurance	280.50	281.00	280.75	.....	281.00
419.	Store and stable	825.53	1,145.97	985.75	.....	986.00
421.	Misc. and general	252.40	3,722.63	1,987.51	—1,662.51	325.00
	Total	\$12,339.53	\$17,097.58	\$14,718.55	.....	\$12,771.00
422.	Taxes, property	\$8,691.17	\$9,480.77	\$9,085.97	+ \$284.03	\$9,370.00
	Taxes, franchise	2,655.99	2,593.70	2,624.85	.....	2,625.00
	Total	\$11,347.16	\$12,074.47	\$11,710.82	.....	\$11,995.00
423.	Uncollectible bills	\$589.51	\$580.74	\$580.13	\$500.00
	Totals	\$52,299.01	\$61,365.78	\$56,832.39	—\$1,634.41	\$55,198.00

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TABLE XVIII.

ALLOCATION OF EXPENSES (1915 AND 1916 AVERAGED AND ADJUSTED) TO DISTRICTS AND CLASSES OF SERVICE.

ITEMS.	Private and Municipal Buildings.			Sprinkling.	Hydrants.	Sub-total.	Railroad Meters.	Total.
	Metered.	Unmetered.	Sub-total.					
Plant expenses (collection, purification and pumping expenses and repairs)—								
Long Branch W. S. district	\$2,732	\$16,282	\$19,014	\$1,389	\$290	\$20,702	\$2,480	\$23,192
New district	525	3,356	3,881	256	104	4,241	592	4,833
Total plant expenses.	\$3,257	\$19,638	\$22,895	\$1,645	\$403	\$24,948	\$3,082	\$28,025
Distribution expenses—								
Long Branch W. S. district	\$148	\$849	\$992	\$71	\$294	\$1,357	\$93	\$1,450
New district	21	134	155	11	57	223	16	230
Total	\$164	\$983	\$1,147	\$82	\$351	\$1,580	\$109	\$1,689
Taxes in proportion to all property—								
Long Branch W. S. district	\$1,115	\$6,872	\$7,487	\$535	\$1,285	\$9,307	\$830	\$10,137
New district	175	1,150	1,325	90	256	1,690	178	1,858
Total	\$1,290	\$7,522	\$8,812	\$634	\$1,541	\$10,987	\$1,008	\$11,995
Accounting and commercial—								
Long Branch W. S. district	\$2,608	\$1,296	\$3,904	\$50	\$147	\$4,101	\$37	\$4,138
New district	480	380	810	13	58	876	12	888
Total	\$3,088	\$1,626	\$4,714	\$63	\$200	\$4,977	\$49	\$5,026
General expense and uncollected—								
Long Branch W. S. district	\$1,195	\$4,490	\$5,685	\$370	\$373	\$6,428	\$619	\$7,047
New district	217	901	1,118	68	86	1,272	144	1,416
Total	\$1,412	\$5,391	\$6,803	\$438	\$459	\$7,700	\$763	\$8,463
Total expenses (no depreciation)—								
Long Branch W. S. district	\$7,793	\$29,289	\$37,082	\$2,415	\$2,431	\$41,928	\$4,036	\$45,964
New district	1,418	5,871	7,289	447	556	8,292	942	9,234
Total	\$9,211	\$35,160	\$44,371	\$2,862	\$2,987	\$50,220	\$4,978	\$55,198

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TABLE XIX.

ALLOCATION OF ANNUAL DEPRECIATION (STRAIGHT LINE BASIS)—IN PERCENTAGE OF TOTAL.

	<i>L. B. W. S. District.</i>	<i>New District.</i>	<i>Company Total.</i>
Private and municipal buildings, etc.—			
Metered	9.55	1.70	11.25
Unmetered	52.52	9.55	62.07
Sub-total	62.07	11.25	73.32
Sprinkling	4.94	0.73	5.67
Hydrants	10.89	2.29	13.18
Sub-total	77.90	14.27	92.17
Railroad use, metered	6.35	1.48	7.83
Total	84.25	15.75	100.00

NOTE.—Total depreciation taken as \$24,282.

Table XX. shows the allocation of actual revenue received, from June 1st, 1915, to May 31st, 1916, adjusted and corrected to accord with investigation made by Board's inspectors. (See page 507.)

It should be distinctly understood that in all these tables hydrants have not been charged with the full amount which a rigid analysis might require; they are treated in the same way as other classes of service with the single exception noted under mains.

RESULTS OF THE STUDY.

In Table XXI. (page 508) the results of the study are brought into condensed form, showing for the old and new districts and for the entire company, and by classes of service the operating revenue received, the operating expenses and taxes, the annual depreciation, the sum of the latter two items (revenue deductions), the net revenue which may be devoted to interest on capital used and useful, followed by the apportionment of capital allocated to each class of service in each district, on the two bases of \$1,855,000 and \$1,545,000, together with the net return in percentage of the corresponding capital on these two bases.

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TABLE XX.									
REVENUE APPORTIONED TO DISTRICTS AND CLASSES OF SERVICE PERIOD, JUNE 1ST, 1915, TO MAY 31ST, 1916—FILE 335-1-150.									
DISTRICT.	Private and Municipal Buildings, etc.		Subtotal.	Sprinkling.	Hydrants.	Subtotal.	R. R. Use Metered.	Total.	
	Metered.	Unmetered.							
Long Branch City—Private.	\$15,760 92	\$61,496 90	.....	\$2,336 76	\$100 00	.....	\$11,330 71	.....	.....
Public	1,482 81	287 10	.....	.....	5,325 00	.....	.....	.....	.....
Miscellaneous water	\$17,243 73	\$51,784 00	\$69,027 73	\$2,336 76	\$5,425 00	\$76,780 49	\$11,330 71	\$98,120 20	.....
	600 98	.....	600 98	1,829 48	.....	2,130 43	.....	2,130 43	.....
Long Branch, W. S. District—Private.	\$17,844 71	\$51,784 00	\$69,628 71	\$3,866 21	\$5,425 00	\$78,019 92	\$11,330 71	\$90,250 63	.....
Public	\$22,553 15	\$75,918 02	.....	\$2,410 00	.....	.....	\$11,330 71	.....	.....
	1,759 73	287 10	.....	.....	\$7,375 45	.....	.....	.....	.....
Asbury Park	\$24,312 88	\$76,206 12	\$100,518 00	\$2,410 00	\$7,375 45	\$110,303 54	\$11,330 71	\$121,634 25	.....
Miscellaneous water	\$25 87	.....	\$25 87	.....	.....	\$25 87	.....	\$25 87	.....
	864 82	.....	864 82	\$2,277 28	.....	3,172 10	.....	3,172 10	.....
New District—Private	\$25,233 57	\$76,206 12	\$101,438 69	\$4,687 37	\$7,375 45	\$113,501 51	\$11,330 71	\$124,832 22	.....
Public	\$4,272 83	\$16,297 80	.....	\$447 04	\$2,925 00	.....	\$2,831 04	.....	.....
	360 75	.....	.....	.....	.....	.....	.....	.....	.....
Miscellaneous water	\$4,633 58	\$16,297 80	\$20,931 38	\$447 04	\$2,925 00	\$24,304 32	\$2,831 04	\$27,135 36	.....
	185 10	.....	185 10	471 07	.....	656 17	.....	656 17	.....
	\$4,818 98	\$16,297 80	\$21,116 44	\$919 01	\$2,925 00	\$24,060 49	\$2,831 04	\$27,791 53	.....
Total for company—Private	\$26,825 98	\$92,215 82	\$119,041 80	.....	.....	.....	.....	.....	.....
Public	2,120 46	.....	2,407 58	.....	.....	.....	.....	.....	.....
Asbury Park	25 87	.....	25 87	.....	.....	.....	.....	.....	.....
Miscellaneous water	\$26,972 33	\$92,502 92	\$121,475 25	\$2,858 03	\$10,300 45	\$134,633 73	\$14,161 75	\$148,795 48	.....
	1,079 02	.....	1,079 02	2,748 35	.....	3,828 27	.....	3,828 27	.....
Total	\$30,052 25	\$92,502 92	\$122,555 17	\$5,806 38	\$10,300 45	\$138,462 00	\$14,161 75	\$152,623 75

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TABLE XXI.—ALLOCATION OF NET REVENUE AND CAPITAL TO DISTRICTS AND TO CLASSES OF SERVICE REVENUE FOR YEAR ENDING MAY 31ST, 1916. CAPITAL ON BASIS OF \$1,855,000 AND \$1,545,000. NO INTANGIBLE CAPITAL IS INCLUDED HEREIN.

DISTRICT	Private and Municipal Buildings, etc.		Subtotal (3)	Sprinkling (4)	Hydrants (5)	Subtotal (6)	R. R. Use Metered (7)	Total (6) & (7) (8)
	Metered (1)	Unmetered (2)						
Long Branch, W. S. District—								
Actual revenue	\$25,234	\$76,205	\$101,439	\$4,687	\$7,375	\$113,501	\$11,331	\$124,832
Operating expense, adjusted	\$7,793	\$29,289	\$37,082	\$2,415	\$2,431	\$41,928	\$4,038	\$45,964
Depreciation, straight line	2,319	12,753	15,072	1,300	2,644	18,916	1,542	20,458
Total revenue deductions	\$10,112	\$42,042	\$52,154	\$3,015	\$5,075	\$60,844	\$5,578	\$66,422
Net revenue	\$15,122	\$34,163	\$49,285	\$1,072	\$2,300	\$52,657	\$5,753	\$58,410
Capital on \$1,855,000 basis	\$171,773	\$662,240	\$1,104,013	\$5,144	\$200,155	\$1,409,312	\$118,349	\$1,527,661
Per cent. earned on this basis	8.80%	3.45%	4.22%	1.36%	1.15%	3.63%	4.86%	3.73%
Capital on \$1,545,000 basis	143,067	\$26,421	969,488	70,915	166,706	1,207,109	98,571	1,306,060
Per cent. earned on this basis	10.57%	4.13%	5.08%	1.51%	1.38%	4.36%	5.84%	4.47%
New District—								
Actual revenue	\$4,819	\$16,298	\$21,117	\$919	\$2,925	\$24,901	\$2,831	\$27,792
Operating expense, adjusted	\$1,418	\$5,871	\$7,289	\$447	\$556	\$8,202	\$942	\$9,234
Depreciation, straight line	413	2,319	2,732	177	556	3,465	859	3,824
Total revenue deductions	\$1,831	\$8,190	\$10,021	\$634	\$1,112	\$11,767	\$1,801	\$13,068
Net revenue	\$2,988	\$8,108	\$11,096	\$285	\$1,813	\$13,204	\$1,580	\$14,734
Capital on \$1,855,000 basis	\$29,209	\$177,152	\$206,461	\$13,542	\$89,882	\$299,885	\$27,454	\$327,339
Per cent. earned on this basis	10.20%	4.58%	5.37%	2.18%	4.55%	5.08%	5.57%	5.13%
Capital on \$1,545,000 basis	24,411	147,547	171,968	11,279	33,217	216,454	22,866	239,320
Per cent. earned on this basis	12.24%	5.50%	6.45%	2.61%	5.46%	6.10%	6.69%	6.16%
Company total—								
Actual revenue	\$30,053	\$92,503	\$122,556	\$5,606	\$10,300	\$138,462	\$14,162	\$152,624
Operating expense, adjusted	\$9,211	\$35,160	\$44,371	\$2,862	\$2,967	\$50,220	\$4,978	\$55,198
Depreciation, straight line	2,732	15,072	17,804	1,377	3,200	22,381	1,901	24,282
Total revenue deductions	\$11,943	\$50,232	\$62,175	\$4,239	\$6,187	\$72,601	\$6,879	\$79,480
Net revenue	\$18,110	\$42,271	\$60,381	\$1,367	\$4,113	\$65,861	\$7,283	\$73,144
Capital on \$1,855,000 basis	\$201,062	\$1,169,392	\$1,370,474	\$18,686	\$240,037	\$1,709,197	\$145,903	\$1,855,000
Per cent. earned on this basis	9.00%	3.61%	4.54%	1.39%	1.71%	3.85%	5.00%	3.94%
Capital on \$1,545,000 basis	167,478	978,968	1,141,440	\$2,104	189,923	1,423,563	121,437	1,545,000
Per cent. earned on this basis	10.81%	4.34%	5.20%	1.60%	2.00%	4.63%	6.00%	4.73%

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From the foregoing table, XXI., it will be seen that no mistake was made by the Tintern Manor Water Company when it, in 1903, extended into territory other than that supplied by the old Long Branch Water Supply Company. This is shown by the fact that while the business in the territory as a whole (on an investment base of \$1,855,000) shows a rate of 3.94% on the same basis of value the Long Branch Water Supply District shows a net return of only 3.73%.

It has been contended that the company was not justified in selling water at 10c. per M. gallons to the railroads while other customers were required to pay rates ranging from 30c. downward per M. gallons. The above table shows a net return for the Long Branch Water Supply Company District on the business other than railroad of 3.63%, while the business done with the railroads shows a return of 4.86%, the return on the whole being, as stated, 3.73%. Further indication from the above table is that the rate charged to metered consumers shows a higher percentage of return than is the case with other classes of consumers. To readjust this, however, requires a gradual change from flat rate to metered rate and subsequently a reduction in the metered rates. A partial remedy for this is indicated in the conclusion with reference to the extension of the schedule so that all customers served through meters will be charged in accordance with one schedule of rates. The change from flat rate to meter rates will undoubtedly reduce the total charges made to many customers and the company must be protected from too much change due to this by the adoption of an adequate minimum charge which should bear some relation to the size of meter and service and to the number and character of the fixture furnished thereby.

LONG BRANCH CONSIDERED BY ITSELF.

Under the preceding heading we have considered the results to the company from its operations in the territory supplied by the old Long Branch Water Supply Company. The City of Long Branch bases its contention with regard to the water rates on certain assumptions that the city could be supplied from an independent plant at a lower rate than that charged by the Tintern

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Manor Water Company. In order to determine the correctness of this contention we will first take up the operations of the Tintern Manor Water Company as they apply to the City of Long Branch only.

Table XXII. has been made up, allocating the revenue, revenue deductions, net revenues and capital to the various classes of service, as applied to the service for the City of Long Branch only. This has been done by the same method as followed when allocating to the different districts the proper proportions of the plant as it exists and is operated today.

In comment above on Table XXI., it has been shown that the business of the Tintern Manor Water Company shows a higher net rate of return on the business as a whole than in the territory comprised in the supply district of the old Long Branch Water Supply Company.

A comparison between Table XXI. and Table XXII. (on page 511) shows that the most unprofitable part of the territory is that within the old Long Branch Water Supply District, but outside of the City of Long Branch. This poor territory includes Deal, Ocean Township, West Long Branch, Sea Bright and Monmouth Beach.

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TABLE XXII.

ALLOCATION OF NET REVENUE AND CAPITAL TO DISTRICTS AND TO CLASSES OF SERVICE—REVENUE FOR YEAR ENDING MAY 31ST, 1916.
CAPITAL ON BASIS OF \$1,855,000 AND \$1,545,000. NO INTANGIBLE CAPITAL INCLUDED.

DISTRICT.	Private and Municipal Buildings, etc.		Subtotal.	Sprinkling.	Hydrants.	Subtotal.	R. R. Use Metered.	Total.
	Metered.	Unmetered.						
Long Branch City only—								
Actual revenue	\$17,845	\$51,784	\$69,629	\$2,803	\$5,425	\$78,920	\$11,331	\$90,251
Operating expense	5,418	18,415	23,833	1,700	1,464	27,006	4,088	31,182
Depreciation, straight line	1,253	7,686	8,948	786	1,005	11,338	1,542	12,881
	\$6,671	\$28,110	\$32,781	\$2,585	\$3,009	\$38,435	\$5,578	\$44,613
Net revenue	\$11,174	\$23,674	\$30,848	\$1,231	\$2,356	\$40,465	\$5,753	\$46,238
Capital on \$1,855,000 basis	112,784	568,929	681,713	61,029	119,091	861,833	118,349	980,182
Per cent. earned on this basis	9.91%	4.51%	5.40%	2.10%	1.98%	4.70%	4.88%	4.72%
Capital on \$1,545,000 basis	93,936	473,851	567,787	50,831	99,189	718,807	98,571	816,378
Per cent. earned on this basis	11.89%	5.42%	6.49%	2.51%	2.38%	5.08%	5.08%	5.67%

NOTE I.—Hydrant revenue includes private hydrants as well as public.

NOTE II.—Hydrants are not charged with all the capital due to increased pressures in the system, such as increased weight of mains and increased leakage; the latter is increased about 30% over that due to a pressure adequate to serve other classes of customers.

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TABLE XXIII.

SUMMARY OF TOTAL INVESTMENT USING PRESENT PLANT AT TAKANASSEE WITH
SUPPLEMENTED SUPPLY FROM ARTESIAN WELLS SUNK AT STATION SITE
SUITABLE FOR DOMESTIC AND MUNICIPAL NEEDS OF LONG BRANCH
CITY (INCLUDING RAILROADS).

Ref.	ITEM.	Net Cost of		Total.	Addition.		Cost to Re-produce.
		Present Plant.	Additional Plant.		%	Amt.	
106	Reservations	\$14,536	\$10,000	\$24,536	20.0	\$4,907	\$29,443
107	Reservoir—land	10,050	.....	10,050	20.0	3,810	22,860
...	Reservoir—structures	8,481	1,325	9,806	22.5	2,206	12,017
109	Wells .....	.....	102,034	102,034	22.5	22,958	124,991
117	Filters—sand	9,525	.....	9,525	20.0	1,905	11,430
...	Filters—equipment	37,042	32,400	70,042	22.5	15,759	85,801
121	Pumping station—land	9,525	.....	9,525	20.0	1,905	11,430
...	Pumping station—buildings	12,969	15,000	27,969	19.0	5,314	33,283
122	Steam pressure pump equipm't.	82,351	.....	82,351	.....	.....	.....
...	Steam pressure pump equipm't.	7,371 (a)	28,990	68,712	18.5	12,712	81,424
120	Mains in Long Branch	212,207	.....	212,207	.....	.....	.....
...	Mains along border	16,434 (b)	.....	228,641	16.5	37,726	266,367
131	Meters	7,031	.....	7,031	8.5	578	7,629
132	Hydrants	10,850	.....	10,850	9.0	977	11,827
134	General structures—buildings	11,500	.....	11,500	12.0	1,380	12,880
...	General structures—buildings	3,150	.....	3,150	10.0	315	3,465
129	Right-of-way—Long Branch	600	.....	600	20.0	120	720
		\$413,222	\$189,749	\$602,971	.....	\$112,572	\$715,562
...	Organization 2½% .....	.....	.....	.....	.....	.....	17,889
...	Working capital .....	.....	.....	.....	.....	.....	10,000
							\$743,451
						Taken as ..	\$743,500

NOTE.—Assumed plant capacities provide for present needs with 10% for fire uses only. Future needs not considered.

The total value of the present property in Long Branch, with the assumed additions, is \$733,500

The gross revenue from the sale of water at Long Branch, including that for supply to the railroad, is \$88,120

The revenue deductions are as follows:

Operating expenses, adjusted to correspond to the assumed method of operating the West End plant	\$32,176 00
Taxes and insurance	8,141 00
Depreciation	15,410 00
	55,727

Net revenue \$32,893

Table XXIII. made up from Table IV., with additions, gives the value of the property of the Tintern Manor Water Company, located in the City of Long Branch, with adjustments made, however, on the assumption that, instead of the large transmission

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main now running along the western border of the city, an eight-inch pipe is found in place. It is assumed to be possible that a number of wells driven along the shores of Takanassee Lake would provide a sufficient amount of water which, added to the surface supply, would be sufficient for the needs of the city, and to the value of the property of the Tintern Manor Water Company now found in Long Branch has been added an allowance for wells. A further allowance has been made for additional boilers, pumps, compressors and filters, which, it is assumed, would be installed at the West End plant.

The net income is 4.41% on the basis of value found above for the City of Long Branch alone. It should be noted in this calculation that while an allowance has been made for cost of organizing the company and intangibles have been included to the extent of unearned depreciation, nothing has been added for the cost of establishing the business. It should be noted further that the basis of valuation for the physical property is not the cost to reproduce this property at the present time, but is made up by using prices which were normal over a period of ten years prior to the present excessive costs.

MR. SHERRERD'S PLAN.

Acting for the City of Long Branch, Mr. Sherrerd prepared plans and estimates for the construction of a plant at Tinton Falls. Mr. Sherrerd's estimate, as originally stated, called for an investment of \$724,940. In the testimony, however (on pages indicated in reference on table), he modified and increased his original estimates. A table has been made up, given herewith as Number XXIV., which gives the aggregate when based on his testimony. Assuming that his plant is of the proper capacity and has sufficient reserve for a reasonable period in the future, Mr. Sherrerd estimates that the cost for a plant such as he considers necessary is \$808,000. The amount shown above as the net income of the Tintern Manor Water Company would enable the municipality to pay an interest rate of about 4.00% on the investment called for by Mr. Sherrerd's plans.

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A careful consideration of the details of Mr. Sherrerd's plans shows that he has omitted full consideration of a number of items which include railroad crossings and other obstacles, valve boxes, meters, general structures, general equipment, certain overhead charges and working capital. Using the same quantities used by Mr. Sherrerd and including the items omitted in Mr. Sherrerd's original plan, and applying the unit prices agreed to by Mr. Sherrerd as proper in the appraisal of the Tintern Manor Water Company's property, Table XXIV. has been made up.

This indicates that Mr. Sherrerd's estimates, as submitted in his testimony, are insufficient and that it will require approximately \$945,000 to create the plant which Mr. Sherrerd has in mind. It should be noted, in Table XXII., that the value allocated to Long Branch City is \$980,182, tangible property.

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TABLE XXIV.
TINTERN MANOR WATER COMPANY—REF. 335-1-650.
Tinton Falls Plant for Supply of Long Branch from Pine Brook.

Ref. Page In Testi- mony, etc.	ITEM.	Quantities as Estimated by M. R. Sherrerd except where noted.	P. U. C. Estimate Based on Comparable Prices in T. M. Co. Appraisal.			Estimate by M. R. Sherrerd, 1915.	
			Ref.	Unit.	Amount.	Unit.	Amount.
780	Land, Water Rights, etc.	400 acres.	107-2	\$80 00	\$32,000		
780	Stripping and clearing.	398 acres.	107-2	62 50	25,000	\$50 00	\$18,400
Fuller	Relocation of roads.	3.8 miles.	Fuller	1 00 1*	25,000		25,000
806	Water rights		Sherrerd				
	Subtotal				\$100,000		\$95,400
270, etc.	Dam, Gate House, etc.	31,800 yds.	107-1	50	\$15,900	40	\$12,720
270, etc.	Excavation, stripping dam site, etc.	3,700 yds.	107-1 & MRS.	50	1,850	50	1,850
	Excavation, core wall.	1,400 yds.	107-1 & MRS.	50	700	50	250
708-4	Concrete in core wall.	2,410 yds.	107-6 & 1st	*7 50	10,575	0 50	9,165
708-9	Concrete in gate house, intake, etc.	2,315 sq. ft.	107-6 & 1st	*7	18,863	6 50	16,348
708-9	Slope paving, 6" reinforced concrete.	48,350 sq. ft.	Sherrerd	15	8,707	15	8,707
	Gate house equipment, screens, gates, etc., for 30" intake.		107-1 & 1st		4,500		1,000
	Gate house superstructure.		Sherrerd		1,000		1,000
	Subtotal				\$61,645		\$51,040
276-7, etc.	Filter Plant, Pumping Station and Equipment.	18 MGD	550—same as T. M. Co.				
	Filter equipment (including clear water basin)	8 MGD	121-2	\$4,870 00	\$39,760		\$40,000
	Filter building	15 MGD		872 00	25,648		140,000
	Pumping station building and chimney.			1,710 00	69,202		69,202
	Pumping equipment—compound duplex.			4,013 00			
	Condenser pumps—2-6 MGD.						
	1-3 MGD and 500 H.P. boilers.	15 MGD	122-4				
	Subtotal				\$141,586		\$149,202
280	Transmission main—30" steel pipe.	35,900 ft.	Sherrerd	6 00	\$203,400		\$203,400
280 & 281	Distribution System.						
280 & 281	4" cast iron mains, class B.	6,000 ft.	129-55	55	\$500,631	45	\$490,042
280 & 281	6" cast iron mains, class B.	105,880 ft.	129-55	0 703	80,780	65	68,822
280 & 281	8" cast iron mains, class B.	50,405 ft.	129-55	1 055	62,672	95	56,435
280 & 281	10" cast iron mains, class B.	13,910 ft.	129-55	1 33	18,500	1 25	17,387

* Gravel concrete.
* Testimony states 7 MGD capacity per informant. Information estimate was made on basis of 8 MGD, which figure was used in P. U. C. estimate.
† Probably includes some item listed by P. U. C. under gate house equipment.

Long Branch v. Tintern Manor Water Co.

TABLE XXIV.—Continued.
TINTERN MANOR WATER COMPANY—REF. 335-1-650.
Tinton Falls Plant for Supply of Long Branch from Pine Brook.

Ref. Page in Testimony, etc.	ITEM.	Quantities as Estimated by M. R. Sherred except where noted.	P. U. C. Estimate Based on Comparable Prices in T. M. Co. Appraisal.		Estimate by M. R. Sherred, 1915.	
			Ref.	Unit.	Amount.	Unit.	Amount.
Distribution System—(Continued).						
280 & 281	12" cast iron mains, class B.....	18,205 ft.....	129-55	\$1 65	\$30,187	\$1 55
280 & 281	16" cast iron mains, class B.....	8,760 ft.....	129-55	2 47	9,287	2 30
280 & 281	Specials.....	424,000 lbs.....	Incl. with mains above.			
W. H. B.	4" gate valves.....	3.....	129-55	7 50	23	7 65
W. H. B.	6" gate valves.....	340.....	129-55	12 00	4,080	12 25
W. H. B.	8" gate valves.....	61.....	129-55	18 50	1,129	17 75
W. H. B.	10" gate valves.....	12.....	129-55	26 00	312	25 50
W. H. B.	12" gate valves.....	19.....	129-55	35 00	665	32 10
W. H. B.	16" gate valves.....	4.....	129-55	65 00	260	60 00
W. H. B.	24" gate valves.....	7.....	129-55	180 00	1,260	165 00
W. H. B.	Air valves.....	6,900 yds.....	Sherred		1,000	1,155
772	Macadam pavement.....	1,930 yds.....	U. F. B. 121	50	3,450	1,000
772	Brick pavement.....	1,930 yds.....	476	80	1,560	1,725
772	Bituminous pavement.....	3,850 yds.....	Vol. 16	2 25	8,212	80
	Hydrants.....	210.....	132-1	49 00	10,290	1 75
247	Standpipes, 25" diameter by 100' high.....		801-128-1 & Est.		12,500	45 00
					\$249,847	
Est.	Valve boxes, railway and railroad crossings and other obstructions.....		555			Omitted from estimate.
Est.	Meters—same as T. M. Co. in Long Branch.....		131-2		3,000	Omitted from estimate.
Est.	General structures (1 cottage, stable and shed).....		134 & Est.		7,031	Omitted from estimate.
Est.	General equipment—80% T. M. Co. estimate.....		1-4		5,000	Omitted from estimate.
Est.	Total net cost, material and labor.....				\$774,639	\$735,002
247	Engineering, superintendent, omissions, contingencies, etc. Interest and taxes during construction (17.5% of net-10%) or 6.82% of all above.....		Sherred, 10%		77,466	73,460
Est.	Cost to reproduce tangible fixed capital.....				53,009	Omitted from estimate.
Est.	Material and supplies—same as T. M. Co. chargeable to Long Branch City.....				\$910,224	\$808,462
Est.	Cash.....	141				
247	Organization expense—2.5% of tangible fixed capital.....	141				
				Call—	\$944,680	\$808,462
					945,000	808,000

Long Branch v. Tintern Manor Water Co.

MACMILLAN AND WOOD'S PLAN.

MacMillan and Wood, acting for the city in 1913, also made an estimate for a plant to be located in the northern part of Long Branch and including a number of wells, a pumping station and two standpipes. No tests had been made at that time to determine whether such a well plant would furnish sufficient water for the city. In the testimony (see pages 542-543) it was admitted by members of the firm that in some respects their estimates for the cost of the plants are low. Their testimony has been carefully analyzed and from this testimony it would appear that to carry out their plans and provide a system that would supply all of the City of Long Branch, an investment of \$809,218 would be required (Table XXVI). Using again the net income now received by the Tintern Manor Water Company, as shown (*i. e.*, \$32,393), we find that this net income would enable the city to pay an interest rate of 4.0% on the investment required under this plan.

TABLE XXVI.

MACMILLAN AND WOOD'S PLAN FOR LONG BRANCH SUPPLEMENTED.

Ref.	ITEM.	Net Cost.	Addition.		Cost to Re-produce.	Annual %	Depre-ciation.
			%	Amount.			
109	Reservation and land for stations	\$15,725	20.0	\$3,145	\$18,870	.....	.....
109	Springs and wells.....	134,898	22.5	30,451	165,344	5.0	\$8,267
117	Filter building and equip-ment	72,600	22.5	16,385	88,985	1.0	889
121	Pumping station, stack and suction wells	33,000	19.0	6,270	39,270	1.0	393
122	Steam pressure pump equip-ment	48,815	18.5	9,031	57,846	2.5	1,446
123	Standpipe lots	500	20.0	100	600	.....	.....
...	Standpipes and connections,	90,180	17.5	15,782	105,962	2.0	2,119
129	Mains (see 506)	228,641	16.5	37,726	266,367	1.02	2,717
131	Meters	7,031	8.5	578	7,629	2.5	191
132	Hydrants	10,850	9.0	977	11,827	2.0	236
134	General structures — build-ings	11,500	12.0	1,380	12,880	2.0	257
135	General structures — equip-ment	3,150	10.0	315	3,465	6.67	231
129	Right-of-way in West Long Branch	600	20.0	120	720	.....	.....
...	Organisation, 2½%	\$657,465	18.6	\$122,210	\$779,715	2.15	\$16,746
...	Working capital .....	.....	.....	.....	19,503	16.7	*2,797
...	.....	.....	.....	.....	10,000	.....	.....
...	.....	.....	.....	.....	\$809,218	.....	\$19,543

NOTE.—Assumed capacity of plant provides for present needs with 10% for fire uses only; future needs are not considered.

* This is to allow for actual experience of the company.

Long Branch v. Tintern Manor Water Co.

In Mr. Wood's estimate are contained assumed figures for operating expenses. These expenses plus allowance for interest on the investment are used as the basis for an assumed revenue of \$60,000.

This assumed revenue was to be collected from Long Branch through the sale of 800,000,000 gallons of water per annum, and it was contended that the average net charge would be 7½c. per M. gallons. It should be noted that their estimates include nothing for leakage and the amount of water which they assume could be sold, that is, 800,000,000 gallons, is approximately the amount of water pumped. In view of the fact that only about 70% of this water actually reaches the customers, making a net total sold of 560,000,000 gallons, the net average rate of charge would have to be 10.7c. per M. gallons, sold.

If their operating expenses, depreciation and interest are made conformable to the above, the rate for water sold will be approximately double their estimate.

There is much confusion in the minds of people, generally, with regard to the meaning of the term "average net revenue per 1,000 gallons of water sold." It has been shown that at the present time the Tintern Manor Water Company is receiving 15.6c. per 1,000 gallons of water sold, although the base rate of the company is 30c. per 1,000 gallons. The rate charged by the company is as follows:

- 30c. per 1,000 gallons for the first 200,000 gallons in the year.
- 25c. per 1,000 gallons for the next 200,000 gallons in the year.
- 20c. per 1,000 gallons for the next 200,000 gallons in the year.
- 15c. per 1,000 gallons for all in excess of 600,000 gallons.

A considerable amount of water is sold at rates lower than the base rate of 30c. Water is sold to the railroads at 10c. per 1,000 gallons. The company justifies this by the statement that it is taken during off-peak hours, and as stated the net revenue to the company is 15.6c. per 1,000 gallons of water sold. Even if Mac-Millan and Wood are correct in their assumption that water could be sold from their plant at 10.7c. per 1,000 gallons, this could not be obtained by charging a flat uniform rate to all customers, large and small, but would have to be obtained through the medium of

Long Branch v. Tintern Manor Water Co.

some sliding scale, such as is now employed by the company, the company's present scale, as shown, ranging from 30c. down to 10c.

It will be seen from the above comparisons that little would be gained by the construction of a plant to serve the City of Long Branch only.

FINANCIAL RESULTS.

From the foregoing analyses and comparisons, the following clearly appears:

(1) The gross revenues collected by the company from its territory as a whole, have not been excessive or unreasonable.

(2) Separating the territory supplied by the old Long Branch Water Supply Company from the rest of the territory and assuming a plant adequate to serve this segregated territory, the company under this assumption would not have received excessive or unreasonable revenues.

(3) Assuming, again, that the property is segregated and considering only the territory supplied by the old Long Branch Water Company, but assuming further that the Tintern Manor Water Company supplied all of the service to the Borough of Deal, the revenues under that assumed state of facts would not have been excessive or unreasonable.

(4) Again segregating the property so as to consider the City of Long Branch by itself, and charging to Long Branch its proper share of the Tintern Manor plant, and comparing the results which might have been obtained from a supplemented plant at West End, the gross revenues and net results to the company have not been sufficient, and would not have been sufficient under assumed changes, to justify the charge that the revenue collected by the company was excessive and unreasonable.

(5) Comparing the results from the operation of the Tintern Manor plant, as allocated to the City of Long Branch, with the probable results in the operation of either the Sherrerd or Mac-Millan and Wood plants, it does not appear that any material advantage would have accrued to the city by the adoption of either of the above plants referred to.

Long Branch v. Tintern Manor Water Co.

The exact results to a water company under any given state of facts may not necessarily determine the justice and reasonableness of the rates charged. While a utility may charge an amount in excess of the cost of service, and must do so if the plant is to be kept going continuously and further extensions constructed, it does not follow that such rates are collectible. Charges must not exceed the value of service and where the value continues to be actually less than the cost to the utility, the service rendered by it will eventually be lost to the community.

In a case of this kind we are led, therefore, to compare the rates actually charged with rates charged for similar service by other water companies. Indeed, such comparisons were testified to by Mr. MacMillan, but it appears that the utilities selected by him were not strictly comparable with the Tintern Manor Water Company.

Comparisons have been made between the rates charged by the Tintern Manor Water Company and those charged by a number of other water utilities. These comparisons must be of two classes: Comparisons of flat or fixture rates, and comparisons of meter rates. In comparing flat or fixture rates we have taken as a basis a house containing a kitchen sink with hot and cold water, a bathroom with a toilet, a wash basin and bathtub, a laundry with two tubs and a hose attachment for yard sprinkling. The rates charged by a number of utilities in this State for this equipment are as follows:

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TABLE XXVII.

PRIVATE WATER COMPANIES.

<i>Name of Company.</i>	<i>Total Flat Rate.</i>	<i>Number of Consumers —1915</i>
Bergen Aqueduct Company.....	\$25.00	1,642
Commonwealth Water Company	21.00	8,714
Delaware River Water Company.....	18.00	2,028
Millville Water Company	16.00	2,089
Merchantville Water Company.....	20.00	1,637
Mount Holly Water Company.....	22.40	1,088
New Jersey Water Service Company.....	20.50	2,153
Stockton Water Company	19.00	3,824
Tintern Manor Water Company.....	22.50	4,269
Plainfield Union Water Company.....	25.00	11,822

MUNICIPAL WATER COMPANIES.

Bridgeton, City of	\$14.00	3,273
Burlington, City of	16.00	2,286
Camden, City of	16.00	21,698
Cape May, City of.....	21.00	1,193
Gloucester, City of	16.50	2,468
New Brunswick, City of.....	23.00	5,476
Rahway, City of	18.00	2,138
Perth Amboy, City of.....	19.00	4,799
Vineland, Borough of	17.00	1,976
Trenton, City of	17.00	24,575
Woodbury, City of	12.75	1,387

A similar comparison has also been made of the meter rates charged by the Tintern Manor Water Company with meter rates charged by other companies. These rates have been made up in a graphic form in Table XXIX., for purposes of easy comparison, and have also been put in a tabular form, this table following as Table XXVIII.

From this table can be readily seen the cost in different localities for an assumed consumption of water. In the first column will be found the base rate; in the second, the minimum charge; the third column gives the net rate where the consumption is 5,000 gallons or less per quarter. The other columns give the actual charge for larger quantities of water and make possible a ready comparison.

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TABLE XXVIII.

TINTERN MANOR WATER COMPANY—REF. 335-1-220.

WATER COMPANY.	Location.	Base Rate Per M. Gals.	Minimum Charge per Quarter.	Comparison of Quarterly Bills for Quarterly Consumption of										Total
				5 M. Gals.	7.5 M. Gals.	10 M. Gals.	20 M. Gals.	50 M. Gals.	75 M. Gals.	100 M. Gals.	150 M. Gals.	200 M. Gals.	300 M. Gals.	
Elizabethtown Water Co.	Elizabeth	\$0 30	\$2 50	\$2 50	\$2 50	\$2 75	\$5 80	\$13 20	\$18 00	\$23 50	\$31 40	\$38 40	\$52 50	15
Plainfield-Union Water Co.	Plainfield	25	2 50	2 50	2 50	2 50	5 00	12 00	17 00	21 00	30 00	37 50	52 50	16
Round Brook Water Co.	Round Brook	30	2 50	2 50	2 50	2 75	6 00	15 00	21 25	27 50	33 75	40 00	52 50	18
Montclair Water Co.	Montclair	30	2 50	2 50	2 50	3 30	6 30	15 00	21 50	27 25	37 80	47 80	67 80	20
Passaic Water Co.	Passaic	30	2 50	2 50	2 50	2 50	6 00	14 00	15 50	23 50	28 50	33 50	43 50	21
City of Wildwood	Wildwood	30	2 50	2 50	2 50	2 75	6 00	13 75	20 00	25 00	33 75	41 25	58 25	23
Merchantsville Water Co.	Merchantsville	30	3 00	3 00	3 00	3 00	6 00	15 00	22 50	30 00	45 00	60 00	90 00	24
Ocean City Water Co.	Ocean City	286	2 50	2 50	2 50	3 00	6 00	15 00	21 50	27 75	40 00	52 50	77 00	25
New Jersey Water Service Co.	Haddonfield	30	3 00	3 00	3 00	3 00	6 00	13 25	20 00	26 25	37 50	47 50	66 50	26
Averages .....	.....	.....	.....	\$23 50	\$23 50	\$25 55	\$53 10	\$126 20	\$177 85	\$232 55	\$317 70	\$398 45	\$588 50	.....
Rates per 1,000 gallons.	.....	.....	.....	2 62	2 62	2 84	5 80	14 10	19 85	25 88	35 80	44 23	62 10	.....
Tintern Manor Water Co.	.....	.....	.....	2 82	2 82	2 84	5 86	14 10	19 85	25 88	35 80	44 23	62 10	.....
Rates per 1,000 gallons.	Long Branch	30	2 00	2 00	2 25	3 00	6 00	15 00	21 25	27 50	37 50	45 00	60 00	27
Rates per 1,000 gallons.	40	30	30	30	30	234	275	275	225	225

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CHART XXII.

State of New Jersey - Board of Public Utility Commissioners

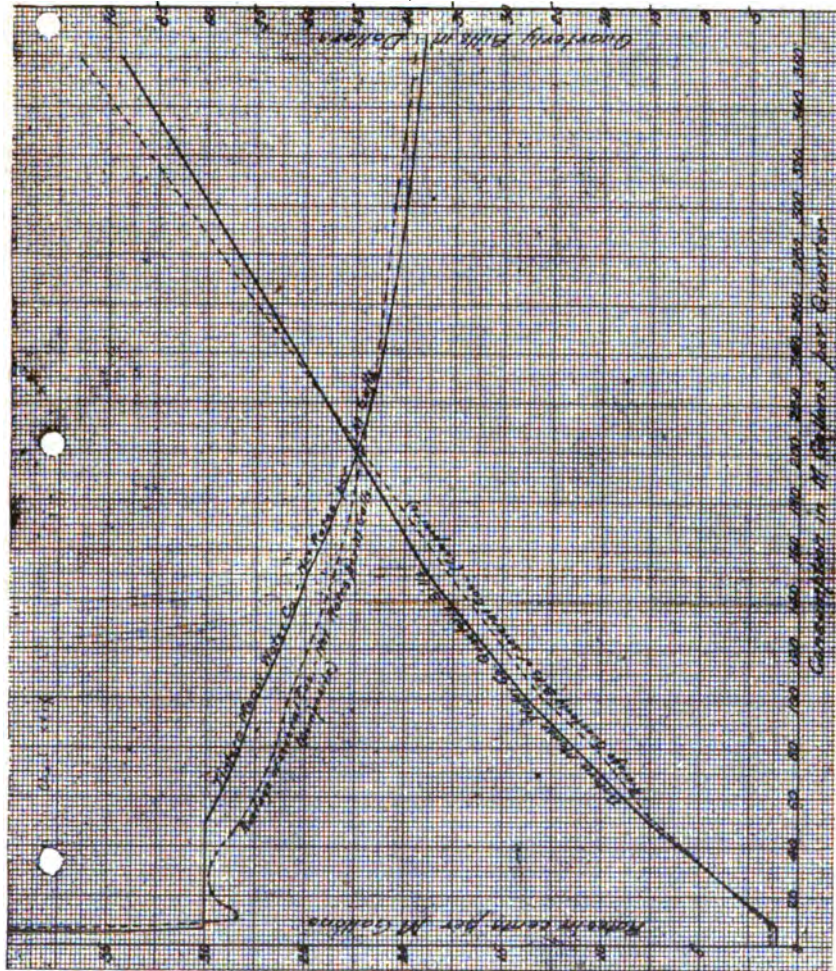
Co. Tintern Manor Water - J.N.V. Date 7-23-17.

Subject - Comparison of meter rates & quarterly bills of T.M.W. Co. with other Co.'s

288

1

281



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From Table XXVIII. it will be seen that the minimum charge per annum varies between \$10.00 and \$12.00, and is more often found at \$10.00 than \$12.00. The rate charged for small quantities of water in most cases is 30c. and in others, 28.6c. and 25c. The Tintern Manor Water Company's rate, it should be noted at this point, is 30c. per 1,000 gallons for the first 200,000 gallons used in the year. From this table it will be noted that the rate charged in Long Branch for the small amount of water is practically the same as in Montclair, Paterson, Passaic, Elizabeth, Bound Brook, Wildwood, etc.

From Chart XXIX. it will be noted that the actual charge made by the Tintern Manor Water Company for amounts of water up to 20,000 gallons per quarter is lower than the average charged by a large number of companies. Between about 23,000 gallons per quarter and 220,000 gallons per quarter, the rate charged by the Tintern Manor Water Company is somewhat higher than the average of the companies referred to. Above 220,000 gallons per quarter, the Tintern Manor Water Company's rate is lower than the average of a large number of companies. The highest difference between the Tintern Manor Water Company's charge and the average of the other companies up to 200,000 gallons per quarter is about 6%. It must be borne in mind that most of the companies in the table of averages are companies serving their customers throughout the entire year. The cost of service under such conditions is, of course, lower, other things being equal.

The present schedule of the Tintern Manor Water Company provides for a charge of 15c. per 1,000 gallons, for all water used in the year in excess of 600,000 gallons; no other step is found in the regular schedule. In 1912, a special rate was filed providing for a charge of 10c. per 1,000 gallons for any customer where the average daily consumption exceeded 50,000 gallons. This rate applies, as a matter of fact, to the service furnished the New York and Long Branch Railroad. It may well be that service under these conditions should be furnished at a lower rate than that found in the regular schedule, but the Board is of opinion that all services furnished must be in accordance with regular schedules of rates, and that such schedules must be so arranged and adapted as to admit of universal application. From a comparative standpoint

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it does not appear that the present schedule is excessive or unreasonable, but one more step should be added to this schedule which would provide for the sale of water at 10c. per 1,000 gallons. The schedule should then be applied without discrimination to all customers served through meters, including the New York and Long Branch Railroad Company and the City of Asbury Park. At the present time, all water sold in excess of 600,000 gallons in the year is charged for at 15c. per 1,000 gallons. It is suggested that the fourth step of the rate schedule be made to read as follows:

15c. per 1,000 gallons for water used in excess of 600,000 gallons up to and including 1,000,000 gallons used in the year,

and that a fifth step be added reading as follows:

10c. per 1,000 gallons for all water used in excess of 1,000,000 gallons in any one year.

The New York and Long Branch Railroad Company may not be treated as one customer for the aggregate of service supplied in Long Branch and in Red Bank. Each of these services must be considered as a separate customer, and charged in accordance with the schedule. To do otherwise would be to grant to the New York and Long Branch Railroad an undue privilege and would result in undue and unjust discrimination against the other customers of the company. It was testified that certain school buildings were arranged in a group and are served as one customer. To do so, in the opinion of the Board, is entirely proper as the tract of land upon which these school buildings are built should constitute a single customer and the rate schedule is appropriately applied.

Every proposition submitted by the city has been examined and carefully analyzed, as to feasibility, practicability, value to the public and rates to private consumers as set forth in this lengthy report. The proposed municipal water plant at Tinton Falls and the suggested re-enforced supply of water for the Long Branch district by artesian wells, would not be of economical advantage but would furnish a poorer service than is now supplied by the Tintern Manor Water Company.

The testimony discloses that the quality and quantity of the water supplied is adequate and good. The rates of the company, in some respects, appear high, but it is because the territory served

Long Branch v. Tintern Manor Water Co.

demands a supply of water for about four months in each year, three times as great as is needed for the permanent population in the winter months. It must be remembered that the duty is imposed upon the company to supply water to all applicants, and how could any city grow and prosper if that were not true? When it performs this duty it is entitled to a fair return on the capital actually expended to render the service which it is obligated to furnish.

We cannot agree with the contention of counsel for the city that because the summer residents make the increased water supply necessary that they should be compelled to pay larger water rates than all year round customers. Such a discrimination would be, in our opinion, unwise and detrimental to the best interest of the city.

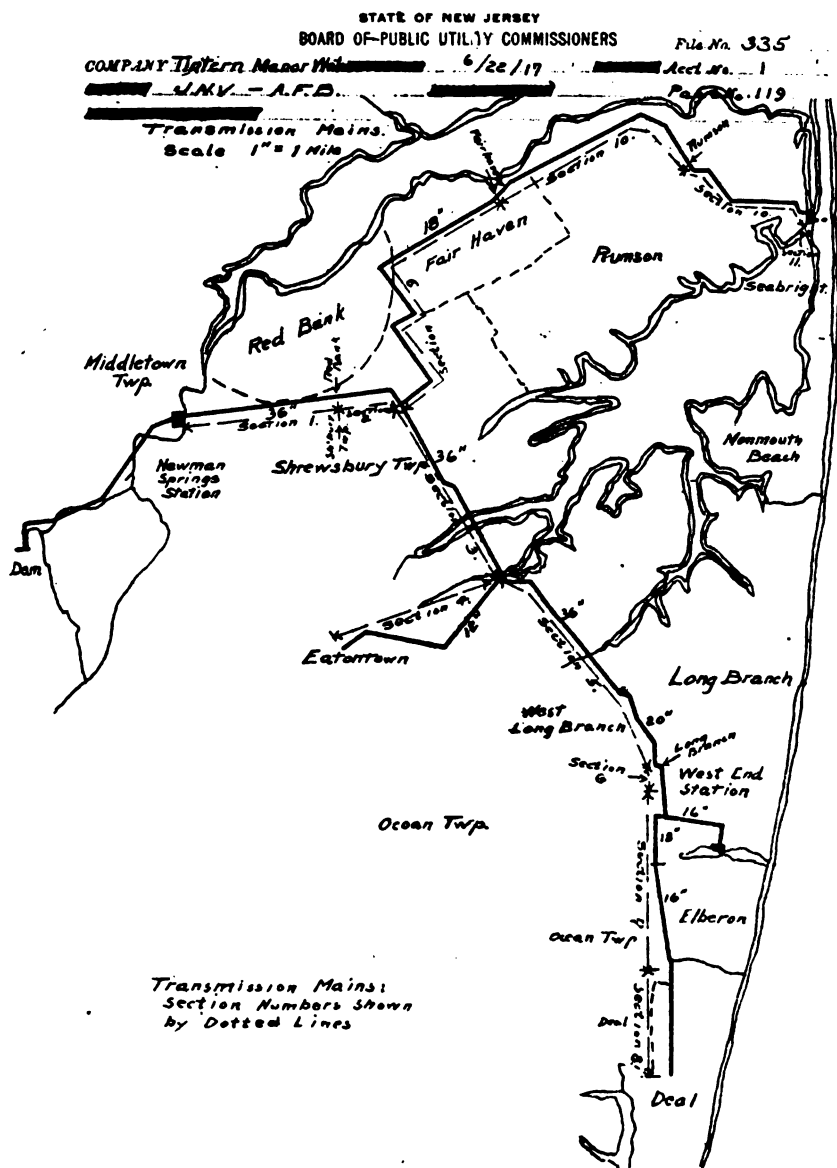
The formal complaint filed by the City of Long Branch alleged that the water company in a number of respects did not treat with its customers in accordance with reasonable rules and regulations. Since the complaint in this case was filed with the Board, uniform rules and regulations for governing the conduct of water companies have been adopted and promulgated by the Board in the form of an order to each water company. These orders are general in character and may not cover many of the minor rules which apply to particular companies. In view, however, of the adoption by the Board of general rules, and in view of the further fact that the City of Long Branch did not press its complaint concerning rules and regulations, no further consideration will be given to this phase of the complaint at this time.

CONCLUSIONS.

The rates charged by the Tintern Manor Water Company are not excessive and unreasonable. Certain features of the schedules referred to above, namely, the application of the schedule to the New York and Long Branch Railroad Company, are found to be discriminatory, and must be corrected in accordance with the conclusion above. As the rates charged are not excessive or unreasonable, upon the filing by the company of a stipulation that it will so modify the rate schedule as to eliminate the undue and unjust discrimination referred to above, the complaint will be dismissed.

Dated September 18th, 1917.

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Failure to Operate—Cape May, Del. Bay and Sewell's Point R. R. et al.

No. 468.

IN THE MATTER OF THE FAILURE TO OPERATE CAPE MAY, DELAWARE BAY AND SEWELL'S POINT RAILROAD AND OCEAN STREET PASSENGER RAILWAY.

It appears that for many years a street railway has been operated at a loss, that its operation has been discontinued; that operation if resumed would not pay operating expenses and taxes, and that to place the road and rolling stock in condition for operation would require the expenditure of large sums of money. *Held—*

1. The Board would not be warranted in requiring the operation of the road. It is only in an extreme case that this conclusion would be reached.
2. If this road were part of a larger system the case would be different, but being a small system it must depend entirely on local business for its revenue.

John W. Wescott and J. Spicer Leaming, for the City of Cape May.

Ernest W. Lloyd, for Cape May Point.

Wilson & Carr, for the Walker-James Company.

Thomas P. Curley, for the Ocean Street Passenger Railway Company.

Jess & Rogers, and *F. S. Edmonds* (of Philadelphia), for Henry A. Hitner's Sons' Company.

Morgan Hand, for the Receiver of Cape May, Delaware Bay and Sewell's Point Railroad Company.

This is a proceeding to determine whether Cape May, Delaware Bay and Sewell's Point Railroad Company, and Ocean Street Passenger Railway Company should be required to operate the street railways formerly operated by them in the City of Cape May.

Failure to Operate—Cape May, Del. Bay and Sewell's Point R. R. et al.

Inspections of the properties by the Board's inspectors disclosed that no arrangements to operate were being made and that no operation was in contemplation.

Thereupon the Board initiated this proceeding, and joined with it the inquiry on the petition of the City of Cape May complaining of the failure to operate and praying for an order requiring the aforesaid companies to operate.

A number of hearings were held and a great deal of testimony taken.

The Cape May, Delaware Bay and Sewell's Point Railroad Company for some years operated a system of railway in Cape May, and from Sewell's Point to Cape May Point. The company went into the hands of a receiver of the Court of Chancery. That court directed the receiver to discontinue the operation of the road. On April 2d, 1917, Alfred Cooper, receiver, by order of the Court of Chancery, sold the franchises and property to Walker-James Company. The sale was confirmed by the Court of Chancery. No application was made to this Board for approval.

Subsequently, the movable physical property, but not the franchises or realty, was sold by the Walker-James Company to Henry A. Hitner's Sons' Company, junk dealers. No application has been made for the approval of that sale.

At the hearings it was urged that the approval of this Board to both of the sales above mentioned is necessary; that the purchaser of the franchises and property at the receiver's sale became, by operation of the statute, a public utility, and became a corporation charged with the duties and clothed with the powers of a railroad company.

These questions were debated orally and in briefs at considerable length. In view of the conclusion reached on the facts pertinent to the specific question under inquiry—whether operation should be presently resumed—we do not deem it necessary to determine any of the legal questions propounded, but prefer to leave them for settlement in appropriate proceedings. We wish, however, to make it clear that the conclusion reached is not to be taken as disposing of any of such questions, and even impliedly giving approval of any matter or thing not specifically having received our approval.

Failure to Operate—Cape May, Del. Bay and Sewell's Point R. R. et al.

The testimony showed that for many years the road had been operated at a loss. The testimony of all witnesses was that the road had never paid and that there was no present prospect of the road earning more than bare operating expenses. The General Manager of the Reading Railroad Company, Charles H. Ewing, and the General Manager of the Pennsylvania Railroad Company, Elisha E. Lee, testified that the companies had operated the road for a number of years and that the average annual operating deficit was in the neighborhood of \$20,000. They further testified that the road is in need of immediate rehabilitation, which will require the expenditure of large sums of money. The rolling stock is in bad shape and would need overhauling before it could be operated. The power station also is in bad shape. It is probable, as was testified, that it would be better to purchase power, in the event of operation, than to operate the power house.

It was sought to show that the location of a naval station, an aviation station and other governmental activities, render necessary the operation of the road. No such representations were made on behalf of the federal authorities. Captain Savage, the Commandant of the Naval District, appeared and testified. He said, however, merely that the operation of the road would be a great convenience in his work and would be a great convenience to the men under him as well as to visitors to the several camps.

If this road is deemed indispensable to the federal activities we assume that fact would be made clear to us, and some steps taken toward its operation.

During the progress of the proceeding efforts were made to bring about some plan for operation, but no one was willing to risk the loss which the history of operation of the road indicated was likely to result.

The question is, therefore, as to whether this Board should, on the record before it, require the present owner to operate. We have carefully reviewed the testimony and have weighed the considerations involved, and are constrained to conclude that we would not be warranted in requiring the present operation of the road. We reach this conclusion reluctantly, because we are mindful of the convenience to the community afforded by railway

Failure to Operate—Cape May, Del. Bay and Sewell's Point R. R. et al.

facilities for the transportation, as in this case, of passengers and freight. It is only in an extreme case that we should conclude not to require operation. If this road were part of a larger system the case would be different, but it is a small system, which must depend entirely on local business for its revenue. From the testimony it appears that the road is not likely to pay operating expenses and taxes, to say nothing of interest on the new capital needed to put the property in condition for operation.

We conclude, therefore, that no order for operation can be entered at this time and the proceeding will be dismissed.

The Ocean Street Passenger Railway Company owns a short line on Ocean Street and Washington Street, in the City of Cape May. It is separate from the other company, but connects with it, and cars are operated over both roads, making a loop from Sewell's Point to Schellenger's Landing, and then over the tracks of the Ocean Street Company to the beach, where connection is again made with the tracks of the Cape May Company. The Ocean Street Company has no power station and owns only a car or two. These are not in good condition. It was the general opinion at the hearings that the operation of the Ocean Street Company depended upon the operation of the other company. It is obvious that it would not be practicable to require the operation of this line unless the Cape May Company line is in operation.

We conclude, therefore, that no order should be made at this time requiring the operation of the line of the Ocean Street Passenger Railway Company, and the proceeding will be dismissed.

Dated October 12th, 1917.

Bridgeton Gas Light Co. et al.—Modification of Rule Fixing Standards for Gas.

No. 469.

APPLICATION OF BRIDGETON GAS LIGHT COMPANY ET ALS. FOR
MODIFICATION OF BOARD'S RULE NO. 1X FIXING STANDARDS
FOR GAS.

In the pending proceeding a single question is to be considered; does the present rule require too high a calorific value, and should it be reduced?
Held—

1. Gas of 600 B. T. U. value is not sufficiently rich to produce trouble from carbonization; nor is it so rich as to require for ordinary uses the delicate adjustment of fixtures which gas of higher heating value requires.

2. If the present standard is lowered, confusion and difficulty would be experienced until new adjustments are made.

3. It is reasonable to assume that if the need of augmenting the supply of fuel to meet the requirements of the Federal Government demands lowering the standard of the heating value of gas set in this state direct representation to that effect would have been made to the Board by the Federal Government.

4. It is practicable to produce gas with a value of 650 B. T. U. which may be for the purpose of obtaining fuel washed down to 600 B. T. U.

5. If under the present abnormal conditions an existing rate is no longer just and reasonable, the situation is not to be met by substituting for a proper and adequate service a service which may be inadequate, but by a specific and direct application for sufficient rates, on which application all of the pertinent facts affecting the question of a just and reasonable rate may be considered.

Theodore J. Grayson, for the Bridgeton Gas Light Company, Tuckerton Gas Company, Ocean County Gas Company, Standard Gas Company, Elizabethtown Gas Light Company, New Jersey Northern Gas Company, New Jersey Gas Company, Wildwood Gas Company, Safety Gas Light Company, General Gas Light Company, Easton Gas Works, City Gas Light Company, Atlantic City Gas Company and Tuckahoe Light and Fuel Company.

L. D. H. Gilmour, for the Public Service Gas Company.

S. J. Franklin, for the Millville Gas Light Company.

Joseph Mayer, for the Coast Gas Company and Lakewood Gas Company.

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Fred R. Cutcheon, for the Consolidated Gas Company of New Jersey.

Francis Engle, for the Elizabethtown Gas Light Company.

John P. Tompkins, for the Hammonton and Egg Harbor City Gas Company and Pleasantville Heat, Light and Power Company.

John A. Riggins, for the New Jersey Northern Gas Company.

Spaulding Frazer, for the Mayor and Common Council of the City of Newark, and New Jersey League of Municipalities.

Randal B. Lewis, for the City of Paterson.

John Milton, for Jersey City.

A. O. Miller and *Geo. L. Record*, for the City of Passaic.

C. E. Bird, for the City of Trenton.

Joseph T. Hague, for the City of Elizabeth.

L. Edward Herrmann and *Frank H. Sommer*, for the Board.

Chapter 195 of the Laws of 1911 provides that the Board shall have power,

16. (e) After hearing, by order in writing, to fix just and reasonable standards, classifications, regulations, practices, measurements or service to be furnished, imposed, observed and followed thereafter by any public utility as herein defined.

(f) After hearing, by order in writing, to ascertain and fix adequate and serviceable standards for the measurement of quantity, quality, pressure, initial voltage or other condition pertaining to the supply of the product or service rendered by any public utility as herein defined, and to prescribe reasonable regulations for examination and test of such product of service and for the measurement thereof.

Pursuant to the provisions aforesaid, after a number of hearings, at which representatives of gas companies, municipalities,

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institutions of learning, other state commissions and the National Bureau of Standards were present, the Board, under date of October 17th, 1911, adopted and promulgated, in the form of an order, uniform rules and regulations for the government of utilities of the State furnishing gas.

Amongst others was a rule providing for the calorific value of gas. That rule is as follows:

“IX. The company furnishing gas which, within a one-mile radius from the distribution center, gives a monthly average total heating value of not less than 600 B. T. U., with a minimum which shall never fall below 550 B. T. U., may be considered as giving adequate service as far as the heating value of gas is concerned.”

In February, 1917, a petition was filed on behalf of Bridgeton Gas Light Company and fourteen other gas companies praying for an alteration or amendment of Rule IX. by reducing the requirement to a monthly average of 550 B. T. U. and a minimum of 525 B. T. U. While this petition was pending, the Public Service Gas Company filed a petition praying that the requirements as to calorific value of gas be suspended, or reduced, or that the company be permitted to increase the price charged for gas. Upon consideration of these petitions, the Board decided to call a general hearing to determine whether the present requirement as to the calorific value of gas is unreasonable and whether it should be suspended or amended. Notice of such hearing was given to all gas utilities, municipalities and the public of the State.

In the pending proceeding there is, therefore, a single question to be considered, namely, does the present rule require too high a calorific value, and should it be reduced.

The reasons urged by the companies were: First, the increased cost of manufacturing and distributing gas. Second, that the consumer can burn more efficiently in ordinary appliances, a leaner gas than one having a value of 600 B. T. U., and, third, that the necessities of war require furnishing additional quantities of benzol and toluol for the manufacture of explosives, which substances can be secured only by washing the gas of the light oils, and reducing the gas to a calorific value of less than 600 B. T. U.

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I.

This proceeding is intentionally not a rate case. It is obvious that it is impossible to fix rates for a number of companies except on the evidence necessary to determine just and reasonable rates for each of such companies.

The question of cost, therefore, is related to the present proceeding only in so far as the purpose of establishing a standard is to provide a calorific value that is practicable and economic, having regard to the necessities of the consumer and the expense and difficulties of manufacture. It is undoubtedly true that a gas of higher value than is reasonably required for the uses of the consumer, or of higher value than can be efficiently used, at higher cost for manufacture, should not be demanded. In other words, if it costs more to get an increased heat value than it is worth to have it, ordinary prudence and common sense dictate that it should not be required.

The proof on the question of cost is meagre and not sufficient to satisfy us that the cost of producing the gas of the present standard is, under ordinary conditions, excessive. Nor does the proof lead to the conclusion that, under ordinary operating conditions, any difficulty is encountered in manufacturing gas of 600 B. T. U. If, therefore, there is a temporary increase in the cost of manufacture, and, because of such increase, and apparent "lack of harmony" between costs and the standards and rates, it should clearly appear that the standard, and not the other factors, should be the subject of adjustment.

We conclude, therefore, that the proofs do not show that the standard should be reduced merely because of fluctuations in the cost of manufacture.

II.

It was sought to show that 600 B. T. U. gas is too rich to be burned efficiently in the appliances commonly used.

The present standard was prescribed after hearing. In pre-

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scribing the question as to whether the standard set was so high as to interfere with efficient burning in appliances commonly used was considered and answered in the negative.

In the present proceeding the companies sought to show by the testimony of several gas experts of wide experience that the consumer would be able to use gas of 550 or 565 B. T. U. to better advantage than gas of 600 B. T. U., because it would be easier to adjust fixtures for more nearly complete combustion of the leaner gas. It was urged by the companies that the consumer would be better off by using leaner gas, because there was less likelihood of carbonization of burners than with the use of richer gas.

The testimony of the experts produced does not, however, support the claim that the leaner gas, all things considered, is of greater benefit to the consumer. Nor does it satisfy us that the standard set by the present rule was at the time, or is now, higher than is required in adequate service. Albert E. Forstall, John B. Klumpp and Robert F. Pierce testified for the companies. They generally agreed that it is easier to secure proper adjustments of burners for the leaner gas than for rich gas, and that, in all probability, ordinary consumers would experience less difficulty as regards carbonization with gas of 500 or 550 B. T. U. than with gas of 600 B. T. U. or more. They agreed that with the leaner gas it would require greater volume to do the same amount of work and that, therefore, the cost to the consumer would be greater to accomplish the same result.

Without entering into an exhaustive discussion of all of the testimony it is sufficient to say that the conclusion reached after consideration of all of the proofs is that gas of 600 B. T. U. value is not sufficiently rich to produce trouble from carbonization; nor is it so rich as to require for ordinary uses the delicate adjustment of fixtures which gas of higher heating value requires.

R. S. McBride, of the National Bureau of Standards, testified "that 600 B. T. U. gas is not as markedly difficult to keep uniform in quality as is twenty-two candle power gas, and the difficulty of using 600 B. T. U. gas on this account is much less than the adjustment difficulties that have been referred to for the high candle power gas."

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He testified further, as follows:

"Q. In the ordinary use of gas for the various purposes for which it is used, domestic purposes, would you say 600 B. T. U. presents any very great difficulty to the consumer, in the ordinary appliances?"

"A. There is no reason why 600 B. T. U. cannot be used very satisfactorily, in my judgment.

"Q. And efficiently?"

"A. With substantially the same efficiency as any other commercial gas usually supplied at the present time.

"Q. As efficiently as lean gas?"

"A. Substantially the same efficiency, yes.

"Q. In other words, then, I take it, in your judgment, 600 B. T. U. gas is not so rich as to present any difficulty in use?"

"A. In my judgment that form is not within the range of what might be called the serious trouble zone."

A review of the testimony leads to the conclusion that 600 B. T. U. gas is not so rich as to be likely to cause much annoyance and loss of efficiency in consumption. The fixtures are now generally adjusted to the present standard. There is no testimony before us to show that the present standard has resulted in carbonization troubles or other conditions making for inefficient service.

On the other hand, it is apparent that if the present standard is lowered confusion and difficulty would be experienced until new adjustments are made. This is particularly true in view of the fact, as was testified, that it is more difficult to maintain a low burning flame with gas below 600 B. T. U., and that flashing back is likely to occur.

The present rule requires a "monthly average total heating value of not less than 600 B. T. U. within a one-mile radius from the distribution center." Much gas in New Jersey is transmitted for long distances—in some cases for many miles—and delivered to the consumers from the transmission mains. It is not unlikely that under the existing rule, much gas reaches the consumer of a value under 600 B. T. U.

The proofs do not satisfy us that the present calorific value is so high as to be inefficient and uneconomical.

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III.

The other insistent of the companies is that the need of toluol in the manufacture of explosives makes it necessary to recover the light oils, and sell the residuals for the making of ammuni-tions.

No one can resist such an appeal, if supported by proof. In fact, one is led unconsciously, to weigh every consideration most heavily in favor of supplying to the Government and its Allies, every possible aid. Every needful sacrifice must be made in order that there may be no interruption of or embarrassment to govern-mental agencies in the prosecution of the war.

While our people must make every necessary sacrifice, no need-less discomfort or expense should be imposed.

The Board unhesitatingly asserts that if the proofs showed that necessary materials could be supplied by granting this application, which otherwise would be denied to the Federal authorities, we would promptly grant the petition.

After such action we would, however, in protection of consumers, be obliged to consider with respect to each company availing itself of the lowered standard the question of whether, under the new conditions, the existing rate was just and reasonable.

It is an undoubtful fact that toluol is useful and, perhaps, necessary in the manufacture of shell filling. It appears to be a fact that these substances are recovered from the light oils washed from some kinds of gas. The questions arise as to whether they are actually recovered by the companies; and, if they are, is their recovery incompatible with supplying gas of 600 B. T. U.

Major J. H. Burns, of the Ordnance Department, U. S. Army, testified that there is need of toluol for the fabrication of explo-sives. He expressed doubt as to whether sufficient would be se-cured, and stated that experiments are being made to find substi-tutes. He further said that the visible supply of toluol is con-stantly increasing.

The testimony of C. E. Leshner, of the United States Geological Survey, who states he has "been engaged in the collection, compila-

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tion and study of statistics of coal production and distribution, coke production and distribution, by-products from coke, artificial gas production and distribution," is very helpful in determining the quantity of toluol recovered and the probability of there being a recovery, except in a few instances, in New Jersey.

Mr. Leshar testified that the statistics show that "no benzol or toluol was reported as having been produced in the manufacture of water gas, the only oils being drip oils and holder oils." It further appears that only large gas producers would be likely to install, or be warranted in installing apparatus for the recovery of these materials. The few plants which now are in position to recover benzol and toluol do so, and are enabled to sell the toluol for the making of explosives.

It does not appear that benzol is so necessary as toluol. Benzol is the ingredient requisite to enrich the gas.

Mr. Leshar testified as follows:

"Q. Is it a fact, Mr. Leshar, that benzol is added to enrich the gas after the benzol and toluol have been separated?

"A. Yes. The statistics contained in this report, page 1051, show that in Connecticut 1,700, in Massachusetts 1,371 gallons, in New York 8,909 gallons, in Tennessee 41,725 gallons of benzol were added to the gas for enriching.

"Q. For enriching?

"A. Yes.

"Q. Was that after the light oils had been recovered and a separation taken place?

"A. In part of this estimate it meant the purchase of benzol; possibly not in the case of Tennessee; I am not sure of my figures there; my recollection does not serve me."

It is reasonable to assume that if the available supply of toluol is inadequate to meet the needs of the Federal Government, and if the need of augmenting the supply demands lowering the standard of the heating value of gas set in this State, direct representation to that effect would have been made to us by the Federal Government. No such representation has been made.

The proofs before us indicate that if the existing standard is lowered, many of the companies of the State would not possess, and could not reasonably be expected to provide the facilities necessary to the recovery of toluol.

Taken as a whole the proofs fail to show with any degree of

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certainly that a material addition to the available supply of toluol would follow upon the lowering of the standard.

On the other hand, the proofs show that toluol might be produced without a lowering of the standard by enriching the gas through the use of benzol, with respect to which there is no serious insistent that the available supply is so insufficient to meet governmental and general industrial needs as to require action of the sort proposed.

It appears furthermore that in the production of toluol from gas it is desirable to obtain a limited amount only from a thousand cubic feet, and that the desire of the companies is to obtain toluol by manufacturing gas of 600 B. T. U. value and washing it down to 550 B. T. U. value.

It does not appear to be necessary that the production of toluol from gas should be confined to treatment between the limits of 600 B. T. U. and 550 B. T. U.

It is practicable to produce gas with a value of 650 B. T. U. which may be for the purpose of obtaining toluol washed down to 600 B. T. U. By so doing requirements for toluol could be met, and users of gas would receive a product having the same characteristics with regard to heat value as they now receive. It is true that it would be more expensive to manufacture gas with a value of 650 B. T. U. The toluol extracted would, however, be a salable commodity commanding a fair price to the producer.

It does not appear that the increased cost of manufacture which might result from working between the limits of 650 B. T. U. and 600 B. T. U. would make it necessary to charge for toluol a price the government would regard as unreasonable, nor does it appear that it could not be sold at a fair price which would cover the increased cost of manufacture and leave a reasonable margin of profit to the producer.

This Board is ever mindful of its duty to exercise its powers in such manner as to aid in the fullest extent, and not to hamper, the Federal Government in the prosecution of the war, and to interpose no bar to the meeting of governmental needs by the companies subject to its jurisdiction.

The course of the Board with reference to the substantial lessening of the transportation facilities afforded to the people of the

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State in order that the necessities of the Government might be met demonstrates its attitude.

The Board, however, cannot fail to be equally mindful of the fact that it owes a duty to the people of the State not to sanction the furnishing by the public utility companies of the State of a service that may be inadequate under a claim not reasonably supported by proof that the need of the Government requires that the burden of inadequate service be borne by the people of the State.

If under the present abnormal conditions an existing rate is no longer just and reasonable, the situation is not to be met by substituting for a proper and adequate service a service which may be inadequate, but by a specific and direct application for sufficient rates, on which application all of the pertinent facts affecting the question of a just and reasonable rate may be considered.

From all of the testimony we conclude that the Board is not warranted in disturbing the present rule.

Dated October 15th, 1917.

No. 470.

IN THE MATTER OF THE APPLICATION OF THE BOARD OF CHOSEN FREEHOLDERS OF THE COUNTY OF PASSAIC FOR AN INCREASE IN HEIGHT AND WIDTH OF THE OPENING OF THE BRIDGE OF THE NEW YORK, SUSQUEHANNA AND WESTERN RAILROAD COMPANY, OVER THE PATERSON AND HAMBURG TURNPIKE ROAD, AND FOR THE RECONSTRUCTION OF THE CULVERT NEAR THE SAME, IN ACCORDANCE THEREWITH.

1. The enforcement of such provisions of the charters of utilities as apply to impeding travel under bridges is a germane and essential duty of the Board.
2. In the case under consideration there is not sufficient proof that the roadway is inadequate to accommodate the traveling public and that the clearance afforded by the bridge, or width of the culvert, impedes the public thereby and is a menace to the traveling public, or the safety of the same, so as to warrant the Board making an order requiring a greater clearance.

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Frederick W. Van Blarcom, for the Board of Chosen Freeholders of the County of Passaic.

A. M. Hartung, for the New York, Susquehanna and Western Railroad Company.

The petition of the Board of Chosen Freeholders of the County of Passaic alleges that the Paterson and Hamburg Turnpike is a public highway and County road and is crossed in the vicinity of Charlottsburg, in the Township of West Milford, Passaic County, by the tracks of the New York, Susquehanna and Western Railroad Company, above grade, on a bridge or trestle with a clearance of thirteen feet nine inches, in width, and an overhead clearance of twelve feet. That because of the narrowness of the same, it is inadequate to accommodate the traffic along the said Paterson and Hamburg Turnpike at that point and is a menace and danger to the traveling public. That in order to accommodate the traveling public and provide safe traffic over said road under the bridge or trestle of the railroad company, the said bridge or trestle should be reconstructed so that the same is at least forty feet in width in the clear and should have an overhead clearance of at last thirteen feet. The petitioner further alleges that, in the construction of said bridge, the respondent diverted a small brook from its natural bed and constructed on said turnpike a small bridge or culvert over said brook. That said bridge or culvert, constructed and maintained by the respondent, is about fourteen feet in breadth across the said turnpike, but not of sufficient breadth to accommodate the traffic and is a menace and danger to the traveling public; that in order properly to accommodate the traveling public, and provide a safe passage over said brook or stream, the said small bridge or culvert should be reconstructed so that the same is of breadth at least forty feet across said turnpike. A plan of the present condition of the turnpike at said point, together with suggested changes, accompanies the same, and the prayer of the petition requests the reconstruction of both the railroad bridge and said culvert, as well as a depression in the road, in accordance therewith.

The petition was amended, making the clearance requested under the railroad trestle fourteen feet instead of thirteen feet.

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The answer of the respondent admits that the turnpike is a public highway and crossed by respondent's tracks, as alleged in the petition, but denies all other allegations of the same, and specially pleads that the Board of Public Utility Commissioners of New Jersey is without jurisdiction in this proceeding, and prays that the complaint be dismissed.

Hearings were held at Newark, N. J., and the same were attended by witnesses in behalf of both parties. The attorney for the respondent at the hearing moved for a dismissal of the petition, on the ground that the Board is without jurisdiction, which question was likewise raised in respondent's answer and brief. The board is bound to follow the ruling at the hearing and deny the application to dismiss, for the reasons given at said time, and as specially set forth in the case of *Borough of Metuchen v. P. R. R., N. J. B. of P. U. R., Vol. 3, p. 196*, to which the Board referred at the hearing as the record indicates. The attorney for the respondent refers to the case of *Mungle v. P. S. R. R. Co., N. J. B. P. U. R., Vol. 1, p. 203*. In the latter case, however, the Board was petitioned to order the Public Service to sell tickets at a certain stipulated price for transportation between Newark, N. J., and the City of New York; and while the relief sought applied to rates, the dispute involved interstate transportation, and the petition was dismissed. While it is stated in said case as follows:

"The power conferred by Chapter 195, P. L. 1911, upon the Commission to require public utilities to 'comply with the laws of this state and any municipal ordinance relating thereto' must be construed in the light of the general purposes of the act.

"Said power cannot reasonably be construed to cover cases where the alleged violation of statute or ordinance does not involve the essential functions, nature and service of a public utility."

We consider that the enforcement of such provisions of the charters of utilities as apply to impeding travel under bridges is a germane and essential duty of the Board, as is contemplated by the broad legislative power under which it acts. There is a distinction between the case above cited and the Metuchen case, which latter case is identical with the case at issue.

The case of *P. S. Electric Co. v. Board of Public Utility Commissioners and the City of Plainfield*, 88 N. J. L., p. 603, is also

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quoted by the attorney for respondent. The distinction between the Plainfield case and the case at issue can be readily observed by a perusal of the decision of the Court of Errors and Appeals in the former case. In said case the Board was called upon to enforce by specific performance the terms of the contract made prior to a non-retroactive legislative enactment under which the Board acted—which the court held was an unlawful invasion of the equitable power of a constitutional court. While the principle that the Legislature of New Jersey cannot impair the jurisdiction of a constitutional court, as set forth in the Plainfield case, and in the opinion of the Court of Errors and Appeals of New Jersey, in the case of *Edward Flanagan v. Guggenheim Smelting Co.*, 63 N. J. L. 647, is a sound one, we are of the opinion that the Legislature had authority to confer on this Board the administrative power of enforcing compliance by utilities with the provisions of their charters, as well as enactments and ordinances applicable to them as such. The “Act concerning public utilities” is as inviolable in this respect as any statute of police regulation. This principle is invoked in the opinion of the Supreme Court in the case of *Erie R. R. Co. v. Board of Public Utility Commissioners and Board of Chosen Freeholders of Hudson*, in the *Belleville Turnpike Case*, 87 N. J. L. 438. In any event, as stated in the Metuchen case heard by this Board, it is not the function of this Board to pass upon the validity of the acts of the Legislature, and we, therefore, are not disposed to take the burden of setting aside the will of the people, as expressed by the Legislature, until competent judicial authority clearly decides in affirmative terms the Board’s lack of jurisdiction.

Until this is done, while we consider the jurisdictional question an interesting academic one, we purpose keeping pace with the spirit of the times, by carrying out the broad, contemplated policies of the Public Utility Act.

The decisions on the facts of the case at issue do not warrant any further discussion as to the jurisdictional question. For the reasons previously given the Board has given consideration to the facts of the case, after carefully inspecting the charters under which the respondent company operates. The charters and legislative enactments referred to are found in the laws of New Jersey,

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1867—an "Act to incorporate the Sussex Valley Railroad;" laws of N. J., 1867, an "Act to incorporate N. J. Western R. R. Co.;" laws of N. J. 1832, an "Act to incorporate the N. J. Hudson and Del. R. R. Co.," and several other enactments specially referred to in the testimony submitted.

The charters referred to provide in substance that the company shall construct and keep in repair good and sufficient bridges or passages over and under the said railroad, where any public road shall intersect or cross the same, so that the passage of carriages, horses and cattle across said road shall not be obstructed or impeded, &c.

The seventeenth section of an "Act concerning public utilities" states as follows:

"The Board shall have power, after hearing upon notice, by order in writing, to require every public utility as herein defined:

(a) To comply with the laws of the state and any municipal ordinance relating thereto, and to conform to the duties imposed upon it thereby or by the provisions of its own charter, whether obtained under any general or special law of this state."

As to the facts: In consideration of cases of this character, the determination of the Board is largely dependent upon three elements, namely—

- (a) The present amount and nature of traffic at the point in question.
- (b) The size of the bridges and culverts in relation thereto.
- (c) And after consideration of one in relation to the other, whether the conditions warrant remedial action on the part of the Board.

Under the proofs submitted by the petitioner, the only traffic count taken on this road was five miles from the bridge in question. The count was taken by Fred G. Sloane, who also testified that traffic that passed the point where he took the count might not continue under the bridge in question, for which reason the same was not received in evidence. The Board is bound to accept the traffic count of the respondent, which is uncontradicted. This count (Ex. R 6) was taken from 7 A. M. to 7 P. M., on March 2d, 3d, 4th and 5th, respectively, 1917, and is as follows:

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1917.	<i>Pedestrians.</i>	<i>Automobiles.</i>	<i>Vehicles.</i>	<i>Horses and Riders.</i>	<i>Bicycles and Motor Cycles.</i>
March 2d	2	65	None	25	4
Total 96.					
March 3d	None	53	None	16	None
Total 69.					
March 4th	None	41	None	6	None
Total 47.					
March 5th	None	3	None	37	
Total 40.					

A summary of the count shows that the total pedestrians for four days amounts to 2; total automobiles, 162; vehicles, none; horses and riders, 84; bicycles and motorcycles, 4, or a total of 252.

The greatest amount of traffic per hour is 13, consisting of twelve automobiles and one horse and rider, which was between the hours of four and five p. m. on March 2d, which indicates that the traffic passing under the bridge at said hour did not exceed on an average of one for approximately four and one-half minutes. The greatest amount of traffic for one day of twelve hours, to wit, March 2d, 1917, was 96, or at the average rate of 8 per hour, or an average rate of one for every seven and one-half minutes; and that the total amount for the four days amounted to 252 for 48 hours, which was at the rate of $5\frac{1}{4}$ per hour, or at an approximate average rate of one for every $11\frac{1}{2}$ minutes. While this traffic count was taken in March, and the traffic for the summer months doubtless exceeds the same to considerable extent as evidenced by the testimony, nevertheless, after due consideration of the proofs submitted, this Board is of the opinion that there is not sufficient proof that the roadway is inadequate to accommodate the traveling public, and that the clearance afforded by the bridge, or width of the culvert, impedes the public thereby, and is a menace to the traveling public, or the safety of the same, so as to warrant this Board's making an order, in accordance with the prayer of the petition.

If the railroad trestle or bridge, as well as the culvert or bridge, were being constructed at the present time, no doubt the respondent, having regard for increasing traffic, especially motor traffic, would concede the advantage and necessity of increasing traffic facilities at this point.

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The traffic on this highway at the point in question may so increase as to alter materially present conditions and make a change in the roadway necessary. Should this occur, the Board will give further consideration to the matter.

The prayer of the petition will be denied and an order, according to this determination, will be made.

Dated October 24th, 1917.

ORDER.

This case being at issue upon complaint and answer on file, and having been duly heard and submitted by the parties, and full investigation of the matters and things involved having been had, and the Board having, on the date hereof, made and filed a report containing its findings of fact and conclusions thereon, which said report is hereby referred to and made a part hereof,

IT IS ORDERED that the complaint in this proceeding be and it is hereby DISMISSED.

Dated October 24th, 1917.

No. 471.

IN THE MATTER OF THE APPLICATION OF THE BUTLER WATER COMPANY FOR APPROVAL OF ISSUE OF \$5,000 BONDS AND \$10,000 STOCK.

1. Inquiry is made whether certain charges for services rendered a public utility were fair and reasonable and whether the utility should be permitted to place these charges against capital account.

2. The Board finds that part of the amount should be charged to operating account.

Thomas J. Hillery, for the company.

Under date of June 15th, the Butler Water Company submitted a petition asking approval of an issue of bonds to the amount

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of \$5,000, and of an issue of 100 shares of its capital stock, par value \$100, amounting to \$10,000. After hearing, this Board, by its report dated August 7th, 1917, approved the issue of bonds in the amount of \$2,000, and of stock in the amount of \$5,000, for capital purposes referred to in the petition, expressly reserving action upon items of claimed capital expenditures aggregating \$8,000.

These items included claims of William L. McCue for \$4,500, Charles G. Wilson for \$1,500, and F. R. Casterlin for \$2,000. The testimony submitted concerning the services rendered and the details thereof was unsatisfactory.

Further hearing was held October 3d for the purpose of ascertaining whether the charges making up these several claims were fair and reasonable for the services rendered; and further whether the company should be permitted to charge them to capital account. It now appears that undoubtedly a portion of them should be charged to operation. The matter should have been properly brought to the Board's attention in the previous application of the company for the issue of securities.

The gentlemen whose claims are now under consideration acted as a committee of the board of directors, and claim to have performed the different services enumerated in their respective bills. They are large stockholders and directors of the company and were from June 1st, 1914, to June 1st, 1917, when the services were performed.

It does not appear that any of the work performed by them was arduous or very difficult. Except for the title searches against tracts of land owned by the company in Morris and Passaic Counties for which Mr. McCue charges \$250, and the sale of bonds amounting to \$120,000, and for which an allowance of \$2,250 is asked, the work was not different from the usual duties required of directors of small companies without much compensation.

We are of opinion that a portion of the charges under consideration may properly be capitalized. These items, in our judgment, amount to \$4,100. We will, therefore, approve the issue of capital stock for this purpose to the amount of \$4,100.

In arriving at this figure, we conclude that the allowance for

Pennsylvania Railroad Co.—Abandonment of Lewistown Station.

services of Mr. McCue covering items which may be capitalized is \$2,500, of Mr. Casterlin \$900, and of Mr. Wilson \$700. In these amounts there is no allowance for services not properly chargeable to capital account.

We have not passed upon the value of the services in general. Whether further allowances should be made and charges against operation we leave to the sound discretion of the directors of the company.

Dated October 24th, 1917.

No. 472.

IN THE MATTER OF THE PETITION OF THE PENNSYLVANIA RAILROAD COMPANY FOR THE ABANDONMENT AS AN AGENCY STATION AND ELIMINATION OF PASSENGER SERVICE AT LEWISTOWN.

It appearing that an army cantonment has required the building of a new railroad station; that the continued maintenance of passenger train service at a station one and nine-tenths miles away interferes with the expeditious movement of trains to and from the camp, and that the old station has been but little used, abandonment of the station as an agency and passenger station is allowed until there is a change in the conditions in the Camp Dix territory.

J. F. Deasy, for the railroad company.

The petition in this case involves the abandonment of the agency station and discontinuance of passenger service at Lewistown, said station to be maintained hereafter as a non-agency station for freight traffic only. A cantonment has been located recently at a point 1.9 miles north of Lewistown, known as Camp Dix, and owing to the large volume of traffic in connection therewith, petitioner's request is made in order that train movements to and from Camp Dix may be expedited.

Lewistown is located near the junction point of the Kinkora Branch of the Pennsylvania Railroad and the Pemberton and

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Hightstown Railroad. The station is owned and maintained by the Pennsylvania Railroad Company and is used jointly with the Pemberton and Hightstown Railroad Company. To afford additional trackage, a wye track has been installed, running from the Kinkora Branch track to Camp Dix, and the petitioner has arranged to use a portion of the Pemberton and Hightstown track from a point near Lewistown north to the camp. Block stations are located at the three connecting points of said tracks to control train movements within the Lewistown and Camp Dix zone. The proposed elimination of stops at Lewistown will prevent holding of passenger trains at the Lewistown block, provide a free movement for trains and maintain the maximum track facilities for operation.

The nearest station to the south of Lewistown is Shreve, distant 0.7 of a mile; to the west, Juliustown, one mile; to the north, Camp Dix, 1.9 miles.

Lewistown is located in a farming section, with few residences at or near the station, and a statement of business submitted by the petitioner shows very small amounts of passenger and freight traffic handled through the station.

The station being an interchange point with the Pemberton and Hightstown Railroad, it is proposed to substitute Pemberton, located 2.7 miles south of Lewistown, as the transfer point. A notice calling attention to the petition and the hearing to be held thereon was posted at the Lewistown Station ten days in advance of said hearing. No objections to the change have been filed; no one appeared at the hearing in opposition and it is assumed that the elimination of the passenger service will not materially affect those using the service at Lewistown. To provide adequate train service at Shreve, the nearest point to Lewistown, it will be necessary for the petitioner to make such additional passenger train stops at said point as will properly accommodate travel to and from the Lewistown section and this will be expected.

As the request of the petitioner is based solely on the necessity for the expeditious movement of trains through the Lewistown zone, and the conditions requiring such movement to promptly handle the large volume of business to and from Camp Dix, the Board will permit the abandonment of Lewistown as an agency

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station, also the elimination of stops for all passenger trains at said point. This arrangement to be effective until there is a change in the conditions now existing in the Camp Dix territory.

Present arrangements for use of tickets and rates now in effect between points on the Pennsylvania Railroad and the Pemberton and Hightstown Railroad to remain the same for business formerly interchanged at Lewistown.

Dated October 24th, 1917.

No. 473.

ANITA L. BASSFORD et al.

v.

BOROUGH OF MADISON.

Because a public utility operates in and actually serves a small portion of a political subdivision it cannot be said that another utility should be excluded from the remainder of the municipality not actually served by said utility, especially where the topography is such that those desiring service can best be served by a utility nearer the proposed customers than the utility already operating in another part of the township.

Carl Vogt, for the petitioners.

Howard F. Barrett, for the Borough of Madison.

Lindabury, Depue & Faulks, (by *Randolph E. Paul*), for
Morris & Somerset Electric Co.

S. W. Borden, for Commonwealth Electric Co.

The petitioners reside in the Township of Chatham, in the County of Morris, on Sun Pike Road, at or near places called

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"The Orchard" and "Hickory Tree," which part of said township immediately adjoins the Borough of Madison.

The said Borough of Madison municipally owns an electric light plant, and for the past few years has been supplying electric current to the petitioners and others in said part of said Township of Chatham.

Boroughs owning and operating electric light plants may supply current for heat, light or power purposes for public or private use to the inhabitants, individually or to any private corporations within any adjoining municipality by and under the provisions of a supplement to an act entitled "A general act relating to boroughs (Revision 1897)," P. L. 1915, chap. 336, page 610. The salient provisions thereof are as follows:

"1. Subject to the approval of the Board of Public Utility Commissioners it shall be lawful for the council of any borough of this state owning and operating an electric light plant:

"b. To supply electric current for heat, light or power purposes for public or private use, to the inhabitants individually or to any private corporation within any adjoining municipality; provided, however, that the governing body of said adjoining municipality shall, by resolution, consent thereto.

"3. *Every borough in respect of its acts in supplying electric current beyond the corporate limits of the borough is hereby declared to be a public utility.* The Board of Public Utility Commissioners of this state shall have the same supervision and regulation of and jurisdiction and control over such boroughs in respect of its acts in supplying electric current beyond the corporate limits of the borough and of and over the property, property rights, equipment, facilities and franchises used in supplying electric current beyond the corporate limits of the borough as over other public utilities. Every borough in respect of its acts in supplying electric current beyond its corporate limits shall be subject as to its service, accounts, property, rights, equipment, franchises, extensions, reports, rates, issuance of bonds or other indebtedness maturing in more than one year from the date thereof to the jurisdiction of said Board of Public Utility Commissioners to the same extent as other public utilities are subject."

By operating its electric plant and supplying electric current beyond its corporate limits, the Borough of Madison would accordingly become a public utility, and the Borough of Madison, becoming apprised of this fact, notified the petitioners and others then being supplied by it with electric current outside of its corporate limits that service of electric current to them would be discontinued on August 15th, 1917, and thereafter.

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No electric light company is located within the Township of Chatham. The easterly part of said township is supplied with electric current by the Commonwealth Electric Company, but the said company operates mainly in territory which lies southwardly of and adjacent to the Township of Chatham. Another company, known as Morris & Somerset Electric Company, operates in and serves territory which lies northwesterly of and adjacent to the Township of Chatham, but this company does not operate in the said Township of Chatham.

The petitioners upon receipt of the notice served upon them by the said Borough of Madison, filed a petition with this Board praying that the said Borough of Madison be ordered and directed to continue to supply electric current to them. Subsequently, an amended petition was filed praying, in the alternative, that the Board either direct the said Borough of Madison to continue to supply electric current to them, or that either the Commonwealth Electric Company or the Morris & Somerset Electric Company be ordered to do so. Neither of the companies nor the Borough of Madison filed an answer to the petition or the amended petition, but upon notice appeared at the hearing held at Newark on September 26th, 1917, when testimony was taken and arguments heard.

The testimony submitted by the borough tended to show that the statutory requirements had not been complied with by it; that no petition to this Board for approval to supply electric current outside of its corporate limits had ever been asked for or had; that the governing body of the Township of Chatham had never, by resolution, consented thereto, and that the Borough of Madison did not desire, because of its act in supplying current beyond its corporate limits, to become a public utility. Some testimony was produced on behalf of petitioners to controvert this, particularly, as to the fact of the consent by the governing body of the Township of Chatham.

Both companies expressed a desire and willingness to supply electric current to the petitioners and others in that part of the township occupied by them. It, therefore, becomes unnecessary for this Board to determine whether it should order and direct the Borough of Madison to continue to serve the petitioners, inasmuch

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as the expressed willingness of both companies to serve them insures immediate relief.

The Board does not express its opinion as to whether, by its acts, the Borough of Madison, could be ordered and directed by this Board to continue service, even though there had been no strict compliance with the requisites of the statute. It, therefore, becomes a question as to which of the two companies can best serve the petitioners and that part of the township.

The Commonwealth Electric Company asserts that it has a prior right to serve the petitioners, and that part of the township wherein they reside, in view of the fact that it is already serving residents in the westerly part of the township.

This Board has said:

"Undoubtedly the existence of a utility in any territory which furnishes satisfactory service is a sufficient ground for refusing permission to another utility to enter the same territory." *In re Rates of Fare—N. J. and Pa. Traction Co., P. U. R., Vol. 4, p. 531 (at p. 534):*

But it cannot be said that merely because a utility company operates in, and actually serves, a small portion of a political subdivision, that another utility should be excluded from the remainder of the municipality not actually served by said utility.

Especially is this so, as in the case before us, where the topography is such that those desiring service can best be served by a utility nearer the proposed customers than the utility already operating in another part of the township.

The topography of the Township of Chatham in the present case is important. The township is divided into two parts by a swamp or marsh. This swamp or marsh is somewhat extensive and it is unlikely any development will ever take place therein which would call for service of electric current by either utility. That part of the township now served by the Commonwealth Electric Company is remote from the part thereof occupied by the petitioners and is separated therefrom by this extensive swamp or marsh, while the Morris & Somerset Electric Company occupies territory outside of the portion of the township now served by the Borough of Madison, but immediately adjacent thereto.

Ross Miller et al. v. Merchantville Water Co.

Logically, therefore, the Morris & Somerset Electric Company should be permitted to extend its lines in ways advantageous to the company and at the same time properly and adequately serve the petitioners and others desiring service of electric current in the part of the township adjacent to its present territory.

Testimony was produced to show that this company had actually taken the preliminary steps to supply electric current to this territory and to the petitioners, so that by permitting said company to furnish service in this territory the petitioners will be afforded immediate relief. The Board is of the opinion that this company, because of the location of its present operations in the territory immediately adjacent to the territory sought to be served is best able to give safe, adequate and proper service to the petitioners, and we RECOMMEND that the Morris & Somerset Electric Company make the necessary extensions to do so.

Dated October 29th, 1917.

No. 474.

ROSS MILLER et al.

v.

MERCHANTVILLE WATER CO.

AMENDMENT OF ORDER.

The Board of Public Utility Commissioners, after hearing, HEREBY ORDERS AND DIRECTS that the effective date of its order dated March 19th, 1917, requiring the Merchantville Water Company to extend certain facilities in the Township of Pensauken shall be made May 1st, 1918.

Dated October 30th, 1917.

Board of Education of West Long Branch et al. v. Tintern Manor Water Co.

No. 475.

BOARD OF EDUCATION OF WEST LONG BRANCH et al.

v.

TINTERN MANOR WATER COMPANY.

1. In passing upon a petition for an order requiring a water company to extend its facilities the cost of the extension is estimated based on existing prices.
2. Where municipal bodies or individuals insist on an extension of facilities, when costs are excessive and unusual, they must pay the increase necessary to cover the same.

Thomas P. Fay, for the petitioners.

Edmund Wilson, for the respondent.

On May 25th, 1917, the Clerk of the Board of Education of the Borough of West Long Branch forwarded a complaint signed by the Water Committee of the Board of Education requesting that an extension of water mains on Cedar Avenue and Wall Street, in said borough, be ordered by this commission.

The matter was investigated by the Board's inspector on June 29th, 1917, and his recommendation was not acceptable to any of the parties. His report now forms part of the present record by consent of counsel.

A supplemental complaint was filed September 20th, 1917, praying for an order to compel the water company to lay an extension of its pipes so that the public school of said borough might be properly and sufficiently supplied with water, and that other citizens, who had joined with the petitioner, might receive water service at their respective properties. The request as modified at the hearing would include the installation of 2,120 feet of 6-inch pipe in North Cedar Avenue and 476 feet of the same size pipe in Wall Street, making a total of 2,596 feet. In order to secure this service the borough agrees to pay for three fire hydrants at \$25.00 each, and the Board of Education agrees to pay an annual water rental of \$60 for the school supply.

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At present the school building is supplied by a 1-inch service pipe in Locust Avenue running northerly to a point a little north of the parsonage. From there a $\frac{3}{4}$ -inch service pipe is run across private lands to the school.

The water company concedes that the school is now improperly and inadequately supplied. It claims that adequate service would be afforded if the company installed a 2-inch service pipe in Locust Avenue and the Board of Education connected the school from the curb with a $1\frac{1}{2}$ -inch service pipe. This the company is willing to do at its own expense at an approximate cost of \$250, and the Board of Education would be charged only for the water registered by the meter, as at the present time.

With the common knowledge that prices of iron, steel, lead and labor have so materially advanced, and the well-known policy of the government departments to discourage any improvements unless absolutely necessary, it was expected that some mutual cooperation would be suggested. This did not happen. On the contrary, on October 8th, 1917, the trustees of the M. E. Church of West Long Branch by resolution authorized their secretary to notify the Board of Education of said borough that they must disconnect their service pipe (which crosses lands owned by the church) by January 1st, 1918.

This Board is governed by that section of the statute which reads: The Board may, after hearing, require a public utility,

"To establish, construct, maintain and operate any reasonable extension of its existing facilities, where, in the judgment of said Board such extension is reasonable and practicable and will furnish sufficient business to justify the construction and maintenance of the same and when the financial condition of the said public utility reasonably warrants the original expenditure required in making and operating such extension."

In consequence of these provisions of the statute, it is obvious that where municipal bodies or individuals insist on an extension of the facilities of any utility, at the present day prices, they must pay the necessary increase to cover the unusual and excessive costs which the utility incurs. This Board is reluctant to have such increase imposed on a community, and therefore directs attention to the fact that higher charges are a corollary of higher installation costs. The daily papers indicate that contracts for delivery of cast

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iron during the first quarter of 1918 are being taken at the base of \$33 per long ton for other than government use. If, and when this price can be secured by the Tintern Manor Water Company, this will reduce the annual revenue to be assured on this extension by a very considerable amount. In view of the possibility that much lower prices may obtain in the near future, it might be well to postpone this installation in order that the applicants may benefit by this reduction in price of materials, and the consequent reduction in the annual revenue based on this figure.

Frank E. Price, a Red Bank contractor, familiar with construction work, filed a bid to furnish all the necessary materials and labor for the work involved for \$6,147. His price was \$59.50 for each fire hydrant; \$29.50 for valves and \$1.96 per lineal foot for the work and pipe installed. Wellington LaMonte estimated the cost to the company at \$1.93 per lineal foot; and H. E. Carver, one of the inspectors of the Board, made an estimate of \$1.60 per lineal foot for labor and materials. Carver's estimate was:

2,600 feet pipe, at \$1.60.....	\$4,160.00
3 six-inch valves, at \$25.....	75.00
3 hydrants, at \$63.....	189.00
Engineering, superintendence and contingencies—10 per cent.....	442.00
11 service connections, at \$12; including curb stop and box, lead connection to main and 16 feet of pipe.....	132.00
1¼-inch galvanized pipe for school service.....	20.00
	<hr/>
	\$5,018.00

In normal times 6-inch water pipe has been laid in country districts as low as 70c. per foot. It has been installed in improved roads for \$1.00 per lineal foot. No such prices are obtainable now.

We find that it is reasonable and practicable to have the extension in North Cedar Avenue 2,120 feet as defined in the petition, and that it is reasonable and practicable to have the extension in Wall Street, from North Cedar Avenue in an easterly direction 476 feet to the school property, and that the financial condition of the said water company reasonably warrants the original expenditure required therefor, but owing to war conditions we will treat first with those extensions necessary to obtain adequate service at the school and fire service for the borough.

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According to the official tax map of the Borough of West Long Branch, the distance from the end of the present water main, corner of Locust and Cedar Avenue, to the middle of the intersection of Wall Street with North Cedar Avenue, is 786 feet. Add to this 786 feet, 476 feet in Wall Street to reach the school building, and we find an extension of water mains to that point requires 1,262 feet. This will give the immediately necessary extension of service.

1,262 feet six-inch pipe installed, at \$1.65, taken as.....	\$2,082.00
3 fire hydrants, at \$60.....	180.00
3 valves, at \$25.....	75.00
Services—individual and to school.....	80.00
Estimated cost	\$2,417.00

In the case of the Township of Eatontown against the Tintern Manor Water Company, in the year 1911, this Board found that in making such extensions as these, a guaranty should be given that the annual income of the company from the consumers residing along the line thereof should amount to at least 10c. per lineal foot thereof in each year for the period of five years. Recent investigations along the same line show the annual revenue of 14c. per foot of extension should be assured.

(a) The basis of 14c. per lineal foot was calculated by computing the cost of cast iron pipe at \$50 a net ton and of lead at 8c. a pound. The testimony introduced in this case shows that these prices have advanced to \$65 for the cast iron and to 12c. for lead, respectively. Taking these new costs into consideration increases the 14c. to 16c. per lineal foot to meet present conditions of the market.

On the modified basis of 16c. per foot, for 1,262 feet, the assured income should be not less than \$201.92.

(b) On a basis of legal interest of 6 per cent. per annum, plus 2 per cent. for depreciation and taxes, the assured revenue on the estimated cost of the 1,262 feet of main, costing, as shown above, \$2,417, would be \$193.36 for the new capital to be invested. To ascertain what revenue is required for the use of existing facilities to pump and bring the water to the extension, we will assume the normal revenue of 10c. a lineal foot, as shown in the case of the

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Township Committee of the Township of Eatontown v. The Tintern Manor Water Co. (Reports of the P. U. C., N. J., Vol. 1, p. 314), cited above:

Total revenue to be assured.....	10.0c.
Less 8 per cent. on 80c. for new capital.....	6.4c.
For existing facilities, expense and taxes.....	3.6c.

One thousand two hundred and sixty-two feet at 3.6c. would indicate a revenue for this purpose of \$45.44. Summing up, we have—

Assured revenue for the extension of 1,262 feet.....	\$193.36
Assured revenue for existing facilities.....	45.44
Total revenue to be assured annually for five years.....	\$238.80

In the complaint of *Bulmer v. Wildwood Water Works Co., Vol. 1, P. U. R., p. 33*, the Board said:

"Nor is this Board ready to concede as universally valid the refusal on the part of public utilities to make extensions because such extensions would not, from the beginning, afford a profitable return; provided, always, that the extension is a good business proposition, carrying fair prospect of a profitable return in the not distant future. If such prospective profitable return is likely, the public utility, both on the ground of its own interest in the development of the locality, as well as on the ground of its duty to serve the inhabitants of the vicinity in which the franchise is exercised, may fairly be presumed to owe the place a reasonable extension of facilities."

Counsel on both sides agree that West Long Branch is a growing borough.

We think it both reasonable and for the best interest of the community, at this time, that the offer of the water company to extend a 2-inch service pipe in Locust Avenue, at its own expense, to supply the school, be accepted. The Board of Education and the trustees of the M. E. Church should be willing to co-operate in every practical manner for the purpose of securing immediately an adequate supply of water for the school, without increased burden on the consumers or the taxpayers. The legal obstacle is the laying of a larger sized private service main to the school (in place of the existing one) across the property owned by the church unless con-

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sent be given. Such consent, we believe, can be obtained on assurance that the water service at the parsonage will be adequate and uninterrupted.

However, it may be that the complainants desire to insist on what is claimed to be technically their legal right of having the extension by paying on the basis of the present high cost of installation, and for that reason the Board of Public Utility Commissioners finds subject to the qualifications hereinafter set forth, that the conditions required by section 16, Subdivision (c), Chapter 195 of the Laws of 1911, have been established and therefore will order the Tintern Manor Water Company to extend its mains from their present termination at the junction of Cedar and Locust Avenues to the middle of the intersection of North Cedar Avenue with Wall Street about a distance of 786 feet; thence in a northeasterly direction along the middle of Wall Street a distance of about 476 feet, and to connect the customers along same, including the public school on Wall Street aforesaid; also to install and connect hydrants at points along said main to be designated by the municipal authorities, all to be done within five weeks after it has been satisfactorily proved to this Board that contracts assuring the company an annual revenue of at least \$240 for five years (including in the \$240 the three hydrants at \$25 per year each and revenue from private consumers along said line at the present schedule of rates; said private consumers to include those now on said proposed extension, but taking water furnished over private right of way) are ready to be entered into with said company. The customers who would be served by the extension of mains herein approved are James Atchinson, Albert Woolley, Mr. Ricklefson, the public school and the fire hydrant service for the borough.

Based upon the foregoing calculations of cost, the further extension of 1,334 feet northerly along North Cedar Avenue from the intersection of Wall Street and North Cedar Avenue, would cost \$2,297. The revenue to be assured by customers thereon would be \$230. Upon proof that contracts will be entered into assuring the company an annual revenue of at least \$230 for five years from the proposed customers on said extension, the Board will order the same. This, of course, is based upon the making of the extension first dealt with.

Seashore Gas Co. of Sea Isle City—Discontinuance of Service.

The limitations contained in the tentative agreements signed by these proposed customers make them, at this date, uncertain of enforcement. For expedition and to avoid misunderstandings the Board suggests the obtaining of new ones. The revenues to be paid by customers, as shown above, are to be prorated among all other customers coming on the extensions, if, and when they are connected until the payments so adjusted become equal to the company's regular rates, when the regular meter rates will apply.

Dated October 30th, 1917.

No. 476.

IN THE MATTER OF PROPOSED DISCONTINUANCE OF SERVICE BY
SEASHORE GAS COMPANY OF SEA ISLE CITY.

1. Legal monopolies carry with them consequential obligations of public service. If otherwise, a utility could monopolize a territory, eliminating a competing company therefrom, and discontinue service whenever it considered it unprofitable, to the detriment and jeopardy of the consumers served, and to other utilities which prior thereto might have been willing to serve the territory in question.

2. Discontinuance of service should not be permitted, unless the proposed discontinuance is in every respect on a sound, equitable basis.

3. When a company has not exhausted every reasonable effort to carry out the affirmative duties which the law imposes on it, discontinuance of service will not be allowed.

Eugene C. Cole, for Sea Isle City.

Michael A. Maloney, for the Seashore Gas Co., of Sea Isle City.

This matter came before the Board in the nature of a protest by John Gilroy, attorney for certain stockholders of the Seashore Gas Company of Sea Isle City, against the proposed discontinuance by the Seashore Gas Company of Sea Isle City of the operation of its gas plant on and after October 15th, 1917. The matter was set for hearing, and notice given the Seashore Gas Company of Sea Isle City, John Gilroy and the Borough of Sea Isle City.

Seashore Gas Co. of Sea Isle City—Discontinuance of Service.

Hearing was held at Trenton, and the proposed discontinuance of service was contested by the Borough of Sea Isle City and its citizens. The reason advanced by the Seashore Gas Company of Sea Isle City why there should be a total discontinuance of service is: That there is not a sufficient financial return for the giving of service, and that the company is being operated at a loss.

It is fundamental that a utility has certain privileges given it, in return for service it renders, or is supposed to render, the public, and that acceptance of special privileges and favors from the public creates consequential obligations of public service on its part. For some time past it has been held by this and other similar bodies, in contrast with the previously prevailing encouragement of competition, that so long as a utility gives proper service, it should be protected in the matter of competition in the territory served, because, it is observed, that one company can, in most cases, serve the public more economically than many. This rule of protection crystallizes into the present principle that legal monopolies carry with them consequential obligations of public service. If the rule were otherwise, a utility could monopolize a territory, eliminating a competing company therefrom, and discontinue service, whenever it considered it unprofitable, to the detriment and jeopardy of the consumers served, and to other utilities which prior thereto might have been willing to serve the territory in question.

While the Board is desirous of co-operating with utilities who serve, and consumers who are served, by protecting the interests of all concerned, public interest requires that discontinuance of service should not be permitted unless the proposed discontinuance is in every respect on a sound, equitable basis. Before a utility is allowed to discontinue service the Board must be satisfied that the utility in question has exhausted every possible effort to give the service required; otherwise, the name "public utility," meaning public usefulness, is a misnomer.

In line with the foregoing general statement, the Board must be satisfied by sufficient proof that every effort has been made by the utility to carry out its duties as such, before discontinuance of service is permitted.

We are satisfied in this case that the company has not exhausted

Seashore Gas Co. of Sea Isle City—Discontinuance of Service.

every reasonable effort to carry out the affirmative duties which the law imposes on it. If the company is giving the service at a loss, it could resort to an application for an increase in rates, which would be given consideration by the Board.

No such application has been made since June 8th, 1915. At that time application was made to increase the price of gas from \$1.25 per 1,000 cu. ft. to \$1.75 per 1,000 cu. ft., which application was denied, but an increase from \$1.25 per 1,000 cu. ft. to \$1.50 per 1,000 cu. ft. was granted.

Since the date of said report prices of fuel, materials and labor have risen.

The Board finds and determines that the Seashore Gas Company of Sea Isle City is not warranted in discontinuing service and should continue to give service in the territory it supplies.

The Board RECOMMENDS that if the company desires to be relieved of its duties it negotiate with some other utility having the legal right to give the service required, or that the petitioner and the Borough of Sea Isle City negotiate with each other, to the end that service should be continued.

An order will be made in accordance with this determination.

Dated November 3d, 1917.

ORDER.

This case having been duly heard and submitted by the parties, and full investigation of the matters and things involved having been had, and the Commission having, on the date hereof, made and filed a report containing its findings of fact and conclusions thereon, which said report is hereby referred to and made a part hereof, the said Board

HEREBY ORDERS AND DIRECTS the Seashore Gas Company of Sea Isle City to continue to operate its plant at Sea Isle City and to continue to supply gas to the Borough of Sea Isle City and to the inhabitants of said borough.

This order shall become effective immediately.

Dated November 3d, 1917.

City of Passaic v. Erie R. R. Co.—In reference to Stational Facilities.

No. 477.**IN THE MATTER OF REHEARING THE COMPLAINT OF THE CITY OF
PASSAIC V. ERIE RAILROAD COMPANY—IN REFERENCE TO
STATIONAL FACILITIES AT PASSAIC PARK.**

1. *Held*—There is need of new stational facilities at Passaic Park and the building of the new station was unnecessarily delayed for a long time by the Erie Railroad Company, but inasmuch as definite and substantial proof has been given by the company of the great demands made upon it by the United States authorities by reason of the war the duty of the company to its patrons in respect to said station is superseded at this time by its duty to the nation.

2. As early as conditions warrant the Board will require the building of the station.

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Albert O. Miller, Jr., for the City of Passaic.

Theo. H. Burgess, for the Erie Railroad Company.

The original application in this case was made by the City of Passaic, alleging that the Erie Railroad Company failed to furnish adequate and proper service at Passaic Park Station, and did not maintain its property in such condition as to enable it to do so.

The report of the Board was filed July 18th, 1917, directing the Erie Railroad Company to advise the Board within ten days whether it would, and within what time, build the station, and stated that unless the company within ten days stipulated to do this work within a reasonable time, an appropriate order would be entered.

At the first hearing the railroad company admitted that there was need of additional stational facilities, but claimed that work of this character should be postponed until after the war. The Board declined to allow the railroad company to postpone the erection of the station until after the war, on the company's assertion that it should be relieved of its duties by reason of the war, without definite proof as to just what burdens had been placed upon it by governmental authorities.

The application for rehearing was based on the allegations in

City of Passaic v. Erie R. R. Co.—In reference to Stational Facilities.

the petition that the company could, and would, furnish specific and definite proof why the construction of said station should be deferred until after the war.

The Board ordered a rehearing, and due notice was given the City of Passaic.

It developed at the hearing, by detailed proof, that the Erie Railroad Company is, and will be for some time, taxed to its utmost capacity in the movement of troops and supplies necessary to carry on the war in which the United States of America is at present engaged, and that governmental agencies have called upon the Erie Railroad Company to co-operate with it in every possible way successfully to carry on the war. It was shown also that, in the furtherance of this policy, the Erie Railroad Company is conserving its resources, and that numerous improvements, including desirable ones, similar to the improvements in question, are being postponed.

There was no proof submitted to contradict this testimony.

The Board is of the opinion that there is need of new station facilities at Passaic Park and that the building of the new station was unnecessarily delayed for a long period of time by the Erie Railroad Company, but inasmuch as definite and substantial proof was given by the Erie Railroad Company of the great demands made upon it by the United States authorities by reason of the war, we conclude that the duty of the railroad company to its patrons in respect to said station is superseded at this time by its duty to the nation.

We will, therefore, temporarily relieve the Erie Railroad Company of its duty to provide additional station facilities at Passaic Park, as detailed in the previous report filed by this Board, until the further direction of the Board. As early, however, as conditions warrant, the Board will require the building of said station.

Dated November 5th, 1917.

Central Railroad Co.—Decrease Number of Men in Train Crews.

No. 478.

IN THE MATTER OF THE APPLICATION OF THE CENTRAL RAILROAD COMPANY OF NEW JERSEY FOR PERMISSION TO DECREASE THE NUMBER OF MEN CONSTITUTING THE TRAIN CREWS OPERATING CERTAIN TRAINS COVERED BY THE FULL CREW LAW.

1. The statute prescribing the number of men to constitute train crews is held to be a legislative direction that freight trains containing more than 30 cars shall have a crew of six men, unless the Board finds that fewer men can operate the trains with safety to the public and the employees of the railroad.

2. If it is sought to deal with the trains by classes, the proof should be satisfactory that the characteristics of such classes are substantially uniform and applicable to all trains within the class.

3. The Board is unable, on the proofs submitted, to conclude that all "through freights" all "fast freights" and all "drag freights" do not require a sixth man.

L. Edward Herrmann, for the Commission.

Charles E. Miller, for the Central Railroad Company of New Jersey.

John A. Matthews, for the Brotherhood of Railroad Trainmen.

John J. McLaughlin, Chairman of the Legislative Board of Railroad Trainmen.

James H. Tracey, Vice-Chairman of the Legislative Board of Railroad Trainmen.

John Mullane, Secretary of the Legislative Board of Railroad Trainmen.

The petition filed by the Central Railroad Company of New Jersey requests the authorization of the Board to the withdrawal from service of the sixth or "Full Crew Man" from certain passenger and freight trains.

The sixth or "Full Crew Man" on these trains is required by Chapter 190 of the Laws of 1913.

 Central Railroad Co.—Decrease Number of Men in Train Crews.

The petition of the railroad company is filed pursuant to Chapter 94 of the Laws of 1917, which empowers this Board, either upon its own initiative or complaint in writing, after hearing, or on notice to the petitioner, to direct any common carrier by railroad in this State to employ such number of employees on any of its trains as this Board shall deem necessary to afford safe, adequate and proper service for the protection of the public and the employees of said carrier. The railroads are prohibited from reducing the size of any train crew as required by law, without the authorization of this Board.

The acts, or pertinent parts thereof, are as follows:

CHAP. 190. LAWS OF 1913, P. 342.

"An Act to promote the safety of travelers and employees upon railroads by compelling common carriers by railroad to properly man their trains.

"1. It shall be unlawful for any railroad company, its officers or agents, receiver, or any person or persons doing business in this State, to run or operate over its road, or any part of its road, or permit to be run or operated over its road, or any part of its road, any freight train consisting of more than thirty (30) freight or other cars, exclusive of caboose and locomotive, with train crew consisting of less than six (6) persons, to wit, one engineer, one fireman, one conductor, one flagman and two brakemen."

CHAP. 94. LAWS OF 1917, P. 200.

"An Act to empower the Board of Public Utility Commissioners to require any common carrier by railroad to employ a sufficient number of men in the management of any of its trains and to repeal an act entitled 'An Act to promote the safety of travelers and employees upon railroads by compelling common carriers by railroad to properly man their trains,' approved April first, one thousand nine hundred and thirteen.

"Be it enacted by the Senate and General Assembly of the State of New Jersey:

"1. In addition to the powers and duties now imposed upon and vested in the Board of Public Utility Commissioners, said Board shall have power, upon its own initiative, or upon complaint in writing, by order in writing, after hearing on notice to the parties, to direct any common carrier by railroad in the State of New Jersey to employ such number of employees on any of its trains as said Board of Public Utility Commissioners shall deem necessary to afford safe, adequate and proper service for the protection of the public and the employees of said common carrier.

"2. The Act entitled 'An Act to promote the safety of travelers and employees upon railroads by compelling common carriers by railroad to properly man their trains,' approved April first, one thousand nine hundred and thirteen, is hereby repealed.

"3. No reduction shall be made by any railroad, because of the passage of this act, in any train crew as constituted by law prior to the passage of this act,

Central Railroad Co.—Decrease Number of Men in Train Crews.

without the authorization of the Board of Public Utility Commissioners, as provided in section one of this act.

"4. All acts and parts of acts inconsistent with the provisions of this act are hereby repealed."

Since the passage of the latter act a number of the railroads of this State filed petitions with this Board, seeking its authorization to reduce the size of the train crews now required by the Act of 1913. The present proceeding is the first of these petitions to be heard.

At the opening hearing the railroad company withdrew from its petition all passenger trains and certain freight trains operated by it on its southern division, which were designated by symbols and included in its petition; it was also urged by the petitioner that the remaining trains enumerated in the petition by designation therein by symbols were capable of general classification. These classifications were, namely, "through freights," "fast freights" and "drag freights."

The relief sought therefore by the petitioner, it was announced at the opening hearing, is not as to any particular train enumerated in its petition, but that this Board's order should be broad enough to authorize the petitioner to reduce the number of men employed in operating "all through, fast and drag freight trains."

In the petitioner's brief the relief sought is expressed as follows:

"Because of the variance in the number of trains of these classes operating each day, the petitioner will be precluded from obtaining relief in this or any other like proceeding, unless the order of the Board is broad enough to authorize it to reduce the number of men employed in operating all 'through, fast and drag freight trains.' The question therefore to be determined by this Board resolves itself as follows: Will the operation of any of the trains designated as 'through, fast or drag freight trains' by a train crew of less than six men (the number of men at present required and employed by statute) afford safe, adequate and proper service for the protection of the public and the employees of a common carrier? And, if so, on what train or trains should the railroad be authorized to reduce the crew?"

Numerous hearings consuming many days were had. The evidence presented by the petitioner may be briefly summarized as follows:.

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That all of the trains referred to in the petition may be classified into three classes, viz.: "through freights," "fast freights," and "drag freights." As defined by the general superintendent of the petitioner, its chief operating officer, these classes are as follows:

"The 'through freights' are trains which either pick up their tonnage at the New Jersey terminals and carry it to the terminal in Pennsylvania, or pick up their tonnage at the terminal in Pennsylvania and carry it to the seaboard terminal in New Jersey. They do not do any local work between terminals, although at times they do set off cars here and there, excepting at Hampton, where the westbound through freights generally stop to pick up or drop off cars."

"The 'fast freights' are through freights, but on account of the character of traffic carried by them, are given a preferred schedule."

"The 'drag freights' are through freights running between nearby terminal points."

On week days from 150 to 200 freight trains are operated on the road of the petitioner; of these trains approximately 140 require crews of six men. The petition filed, however, does not enumerate all of these trains but covers only 26 trains designated by symbols. The "through and fast freights" were further classified as those operated over the main line between the Seaboard terminal and Allentown, Mauch Chunk and Scranton, and those operated between the Seaboard terminal and Philadelphia. The trains in the Philadelphia service run over the road of the petitioner to Bound Brook Junction and by the Philadelphia and Reading road to Philadelphia.

The "drag freights" are operated between Jersey City and Elizabethport, Jersey City and Newark, Newark and Elizabethport, and Elizabethport and Chrome; and the number of trains operated each day varies with the amount of freight to be moved.

For the purposes of this hearing records were kept of the movement of trains on September 12th, 1917. On that day there were 26 "through and fast freights" operated in the main line service, and 46 "drag freights" operated between Jersey City and Newark, Newark and Elizabethport, Elizabethport and Jersey City and Elizabethport and Chrome.

The 26 "through and fast freights" in the Philadelphia service made 29 regular stops in New Jersey and four special stops.

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The 24 "main line trains" made 35 regular stops in New Jersey and nine special stops.

The 46 "drag freights" made 18 regular stops and two special stops in New Jersey.

The number of cars picked up and set off in New Jersey by Philadelphia trains on that day were as follows:

77 cars at 5 stops,	48 cars at 1 stop,
45 cars at 1 stop,	42 cars at 5 stops,
40 cars at 1 stop,	37 cars at 3 stops,
30 cars at 1 stop,	14 cars at 2 stops.
10 cars at 2 stops,	8 cars at 3 stops,
8 cars at 2 stops,	3 cars at 2 stops.
3 cars at 1 stop,	

And on the main line the number of cars picked up and set off in New Jersey were as follows:

66 cars at 1 stop,	65 cars at 1 stop,
55 cars at 1 stop,	49 cars at 3 stops,
53 cars at 1 stop,	41 cars at 3 stops,
44 cars at 4 stops,	38 cars at 3 stops,
35 cars at 1 stop,	28 cars at 2 stops
30 cars at 1 stop,	28 cars at 1 stop,
28 cars at 1 stop,	22 cars at 1 stop,
18 cars at 2 stops,	13 cars at 1 stop,
13 cars at 1 stop,	12 cars at 1 stop,
12 cars at 1 stop,	11 cars at 1 stop,
12 cars at 2 stops,	9 cars at 1 stop,
7 cars at 1 stop,	7 cars at 1 stop,
6 cars at 1 stop,	6 cars at 1 stop,
6 cars at 4 stops.	

Three hundred and twelve cars were picked up and set off by the drag trains on that day.

These figures only show the number of stops made by the various trains and the number of cars picked up and set off in New Jersey. The crews of these trains operate them through Pennsylvania to their terminals.

As to the length of train, the General Superintendent testified that the longest through main line train ran from 60 to 75 cars. The "fast freights" are from 50 to 60 cars, possibly 65. "Drag freights" take as many as 60 or 75 cars; they often run with as many as 30 or 40 cars or less.

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The average length of each car is about 40 feet and coal cars are a little longer. All types of cars are included in the make up of the train.

The General Superintendent described the road work performed by the crews on these trains as follows:

"The road work performed by the crews operating through, fast and drag trains consists in riding on the train over the road, picking up or setting off cars, and making repairs if possible, or setting out the car if repairs cannot be made, when accidents, such as pulling out draw-bars, etc., occur. While moving over the road, the engineer, fireman and head brakeman usually ride on the engine, and the second brakeman, the flagman and the conductor ride in the caboose. In addition, it is necessary for the head brakeman, on all main-line trains running east-bound, to turn up 15 retainers, which are a stop-cock or valve leading to the air-brake which hold a certain pressure on the brake cylinders, and thereby make an application of the brakes coming down the grade at Hampton. The operation of turning up the 15 retainers takes from five to ten minutes. The conductors on these through, fast and drag trains are required to do certain clerical work. This work is confined to the conductor. He makes out a wheel report, showing the number and initial of the cars in the train and the place where they are picked up, the kind of car, the contents and the destination. This information is obtained from car-tickets, which are furnished the conductor by the agent or yard force at the place where the car is picked up. When cars are dropped, the conductor adds to his record a statement of the place where the cars are dropped. He has also to make up his conductor's book, which contains the same information as is contained in the wheel report. If any cars are picked up or set off at West Eighth Street the conductor has to make out a form showing the number and initial of the car. Aside from this, the only other clerical work is making out a report of any accident which occurs, or answering any communication received by telegram in connection with the train."

This does not include the work of the crews at the terminals when the train is made up.

This is substantially the case presented to the commission by the petitioner.

The petition was opposed by the Brotherhood of Railroad Trainmen.

It was insisted by the Brotherhood that the burden of proof had not been sustained by the petitioner; that no proof had been submitted to justify the contention of the petitioner that the trains enumerated by it should be consistently classified, and that it did not show that the relief sought should be granted on any of the specified trains mentioned in the petition.

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The respondent then produced as witnesses employees of the petitioner, members of the crews operating the various trains upon which relief is sought. Records were kept by these men of the operation of these trains on other days than the day of which the petitioner kept and produced records. The records were submitted, and testimony was offered of a general character as to the number of stops made by the trains enumerated, the number of pick ups and set offs and the emergencies encountered.

Briefly summarized the testimony of the respondent is as follows:

That at the present time the trains are longer and the tonnage heavier than it was prior to the passage of the "Full Crew Law."

That the number of stops of the trains enumerated in the petition, and of all other through, fast and drag freights are variable. That in addition to the regular stops these trains make many special stops to pick up and set off cars. That in addition to the regular and special stops, the number of emergency stops vary; that is to say, stops for accidents, such as hot boxes, broken brake rigging, coupling disconnection, fire flying and draw-bar pulling, etc. The records of all of these show conclusive variations on all of the trains enumerated in the petition as amended.

The respondent claims that the sixth or "Full Crew Man" is essential.

The work of the crew was detailed by these men. In the main, it might be said that the details as outlined by the men compare favorably with those testified to by the General Superintendent of the petitioner, as well as those testified to by the other witnesses for the petitioner offered in rebuttal.

The crew as constituted consists of an engineer, fireman, conductor, head brakeman, flagman and middle brakeman.

The road crew which is to move the train reports for duty thirty minutes before leaving time.

The head brakeman with the engineer reports at the engine and assists in bringing it from the round-house to the train.

The conductor, middle brakeman and flagman report at the train.

After the engine is coupled up, it is necessary to test the air brakes. While the engine is being brought from the round-house

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the other members of the crew are engaged in the details of filling and cleaning markers, checking up the cars, making out wheel reports, and inspecting the train for bulging doors. If the train is made up on more than one track, doubling over is necessary by moving the cars all on one track, and coupling them together. When the train is made up the train air test is made, a signal is given to apply the air, and the train is inspected to see that the pistons of the brake-cylinders are working properly. The witnesses in stating the work necessary to be done substantially agree, but disagree as to details. This is particularly true as to the inspection, the petitioner contending that this work is done by the car inspectors, and that when the test is made the inspection by the crew is purely perfunctory. It is manifest, however, that the primary tests are made by the car inspectors, and that subsequently a test is made by the crew for the purpose of checking up and seeing that the car inspectors have not missed anything.

The petitioner insists that the crew of three men, excluding the engineer and fireman, would be ample, and that there is no work at the terminals which requires the extra or "Full Crew Man."

The respondent, on the contrary, insists that said man is necessary.

The work necessary to be done by the crew on the road varies with the number of stops to be made, number of cars picked up and set off, the number of cars set off for disability, and the number of stops made for such other purposes as may be necessary, such as taking water, signals and train movements.

The railroad company did not ask in its petition to remove the extra man from all "through," "fast" and "drag" trains operated by it. Only a few of such trains are therein included. We are unable to discover from the testimony what distinguishes the trains mentioned in the petition from the other trains in the classification of the railroad company.

The statute requires a crew of a given number of men unless the Board authorizes a reduction thereof. We take this to be a legislative direction that freight trains containing more than 30 cars shall have a crew of six men, unless the Board finds that fewer men can operate the trains with safety to the public and the employees of the railroad. If it is sought to deal with the trains by classes, the proof should be satisfactory that the characteristics of

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such classes are substantially uniform, and applicable to all trains within the class. Further, the classification should be related to and serve as a guide regarding the size of the crew required to handle such trains.

We are unable, on the proofs submitted, to conclude that all "through freights," all "fast freights" and all "drag freights" do not require a sixth man. To make the order sought by the company would result in permitting the company to exercise its judgment as to the size of crew of all "through," "fast" and "drag freights," and thereby wholly nullify the provisions of the statute.

We are unable to deal with the particular trains specified in the company's petition, because it offered no testimony to show that these individual trains do not require the sixth man. It relies entirely upon establishing the classification above mentioned, which would include the trains specified, as well as other trains.

We conclude, therefore, that the Board cannot, under the proof submitted, authorize the withdrawal of the sixth man from all "through, fast and drag freights," as petitioned by the petitioner, and that the petitioner should continue to operate such trains with crews of the size now required by law. The petition for such withdrawals will be denied.

Dated November 7th, 1917.

No. 479.

IN THE MATTER OF THE COMPLAINT OF J. CHAPMAN

v.

PENNSGROVE WATER SUPPLY COMPANY.

1. It is estimated that an annual revenue of \$72.10 should be assured to afford a return which would justify an extension of facilities by a water utility, this being based on an allowance of 6 per cent. return on the investment and 2 per cent. for depreciation and taxes, with a further allowance of five cents per lineal foot for costs of operation and proportional share of plant to be borne by new consumers.

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2. Where the revenue proposed is materially less than the foregoing the Board concludes that the extension would not furnish sufficient business to justify its construction and maintenance.

Mrs. J. Chapman, for the complainant.

J. A. Riggins, for the respondent.

This complaint alleges that the respondent refuses to make an extension of 450 feet of main, in order to supply the complainant and four others with water.

Hearing was held at the Court House, Camden, N. J., on September 13th, 1917.

This complaint is based on power given the Board under paragraph 2, sec. 17, subdiv. C of "An act concerning public utilities," Chap. 195, P. L. 1911, concerning extensions to existing plants.

The general principles to be applied by the Board in cases of this kind are set forth in the case of *Saddle River Township v. Public Service Gas Co.*, Vol. 2, *Public Utility Rep.*, p. 321, from which the following is quoted:

"Before the Board is warranted in ordering an extension under the act, it must be reasonably certain that the net profit to accrue from the extension will be sufficient to warrant the outlay required. The prospect of profit which would justify the Board in ordering an extension must be more clear and unmistakable than the chance of profit which might warrant a public utility at its own risk and on its own initiative in extending into a similar territory hitherto unsupplied."

Mrs. J. Chapman was the only witness for the complainant. The witnesses for the respondent were J. A. Riggins, representing the company, and E. H. Elliott, a plumber, who does work for the company, as well as for consumers. The testimony submitted by both parties was meagre. It appears from the testimony that there are five persons willing to become customers, of whom two would be on meter, at the rate of \$15 a year each, and three on flat rates, of \$7 per year each. This would produce a total annual gross revenue of \$51. The extension in question would require 450 lineal feet of main, besides the necessary service pipes and meters. The company's representative testified that the cost of installing an extension of this kind would be \$2 per lineal foot, or \$900.

The following is our estimate of the costs of the extension:

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450 feet of 4 in. cast iron pipe, installed at \$1.10 per ft.....	\$495.00
5 services at \$10 each.....	50.00
2 meters and meter boxes at \$20 each.....	40.00
Total	\$585.00
Allowance for estimated profit for plumber for superintending labor, materials to be furnished by company.....	35.00
Total	\$620.00

An allowance of 6 per cent. return on this investment, and 2 per cent. for depreciation and taxes, with a further allowance of five cents per lineal foot, which we consider fair, for costs of operation and proportional share of plant to be borne by new consumers, would summarize as follows:

6% return on \$620 invested.....	\$37.20
2% allowance for depreciation and taxes.....	12.40
.05 per lineal ft., allowance for costs of operation and proportional share of plant to be borne by new customers, on 450 lineal ft.....	22.50
Estimated Total Revenue to be Assured.....	\$72.10

It further appears by the testimony of both complainant and respondent that the thoroughfare where the proposed extension is to be made has never been accepted by the municipality and a grade established, which might result in additional cost to the respondent, in case there is a decided change in the grade.

Inasmuch as the proposed gross revenue received from new customers amounts to \$51 per year, while the estimated annual revenue, to be assured amounts to \$72.10, the Board concludes that such extension is not reasonable and practicable at the present time, and will not furnish sufficient business to justify the construction and maintenance of the same. In the judgment of the Board, however, if the prospective customers will enter into an agreement, assuring a fair return upon the required additional capital expenditure for a period of five years, the extension should be made.

Dated November 13th, 1917.

William Hanley v. Point Pleasant Water Works Co.

No. 480.

IN THE MATTER OF THE COMPLAINT OF WILLIAM HANLEY
AGAINST THE POINT PLEASANT WATER WORKS COMPANY.

1. At a seasonal resort much the greater part of the capital charges and overhead expenses which accrue throughout the year must be met by the amounts collected for the service given during the seasonal period.

2. The test as to the reasonableness of rates cannot be what rate some other utility operating under different conditions charges, but does the rate charged yield to the utility more than a reasonable return upon the fair value of its property operated with reasonable economy?

3. A utility does not act improperly in refusing to allow a customer desiring measured service to install a meter at his own expense, though the title to the meter should be with the water company. To permit this would create a discrimination and would cause a difference between the relations with the water company of those purchasing meters and the relations of those whose meters are paid for by the company.

Joseph Mayer, for the company.

The complainant, a summer resident of Point Pleasant, alleges that the amount charged him for water is excessive. The complainant is served upon a fixture basis. It does not appear that the company has charged against him fixtures not in place, or that it has charged for any fixture more than the rate applicable to the same. The complainant has a number of fixtures at his residence and he appears to be of the opinion that if supplied with metered service his bill would be materially less.

In its report on the complaint of the Mayor and Council of Borough of Point Pleasant v. Point Pleasant Water Works Company, filed February 27th, 1917, the Board stated:

"Point Pleasant is a summer resort and a very large proportion of the residences are unoccupied during the winter months. This might mean that what is ordinarily considered a reasonable minimum charge would be lower than the annual flat rate now paid and it would be manifestly unfair to the company to order the immediate installation of meters on the premises of all consumers. It would be a large item of expense to the company and it is the policy of the Board to have the same gradually installed with as much rapidity as may be reasonable, having regard for the financial condition of the company involved.

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"It is, however, recommended that meters be installed before June 1st, 1917, in connection with hotels, large boarding houses, saloons, laundries, bathing establishments, liverys, boarding stables, garages, greenhouses and all commercial and manufacturing establishments, and residences where unusual conditions of use prevail.

The respondent claims that the complainant's residence is not one where unusual conditions of use prevail, and that it cannot afford to install meters at the present time in excess of the installations recommended by the Board. The complainant meets the company's objection to the installation of the meter because of the expense involved by offering to install such meter at his own expense. In answer to this the company stated:

"We do not believe it to be a proper thing to ask a patron to purchase their own meter. Our company must own all meters and have control over the same."

The complainant, in reply to this, wrote to the company:

"I do not want to own the meter. I am willing that title to the meter remain with you. I am willing to pay you as a deposit the value of the meter, which I understand from your representative would be \$13.50, which payment would relieve you of the hardship of financing the installing of meters."

The Board understands the complainant's position to be that he believes the advantages which will accrue to him from metered service will be such that it would be in his interest to present the company with a meter. The company refuses to accept the complainant's offer of a meter.

The questions to be determined by the Board, therefore, are:

1. Have conditions changed since the Board made its recommendations of February 27th so that the company may be reasonably required to supply meters to all who apply for the same?

2. If the conditions have not so changed, does the residence of the complainant come within the class of those where "unusual conditions of use prevail?"

3. If metered service cannot be required because of changed conditions or because of the type of the premises where such service is requested, does the company act reasonably in refusing to accept complainant's offer to install a meter at his own expense?

There is nothing before the Board which would justify it in assuming that conditions with respect to the operation of the water

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company have so changed since February of this year that the installation of meters may be now reasonably required at all premises where they are desired. From testimony at the hearing it appears that the company has not installed meters at all the premises which would be included within the Board's recommendation. It does appear, however, that a reasonable effort to comply with the recommendation has been made that a number of meters have been installed and that others are to be placed.

Giving due consideration to the conditions now existing, and under which the company must operate, the Board is of the opinion that it would not be reasonable at this time to require the company to proceed any faster than it is now doing in the general installation of meters.

It appears that the fixtures at complainant's residence are charged as follows:

1 sink and first faucet.....	\$7.50
1 basin	2.50
1 basin	2.00
1 closet	2.50
1 closet	2.00
1 bath	2.50
2 washtubs	3.00
2 hose faucets	8.50
Total	<u>\$30.50</u>

This is the charge for the full year.

Complainant claims that his house is occupied but two months of the year, and that the charge to him is at the rate of \$15.25 per month. There cannot, however, be any comparison between the costs per month of supplying water to a summer resident of a seasonal resort and an all-year resident of a place where the population is permanent in character. At the seasonal resort, much the greater part of the capital charges and overhead expenses which accrue throughout the year must be met by the amounts collected for the service given during the seasonal period. The test as to the reasonableness of the rates cannot be what rate some other utility operating under different conditions charges, but does the rate charged yield to the utility more than a reasonable return upon the fair value of its property operated with reasonable economy?

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It does not appear that the company does receive more than such return.

Prior to the summer of 1916 the fixtures installed at complainant's residence, which then was not owned by the complainant, were less in number than at the present time, and the company's bill for the fixtures then installed was \$15.00 per year. An increased number of fixtures placed at Mr. Hanley's direction, for his greater convenience, has led to the increased charge of which he complains.

It does not appear that the installation of the additional fixtures causes such unusual conditions to exist that the Board can reasonably hold that the company should be required to install a meter in advance of the time when in the regular installation of meters by the company the house would be reached.

The Board cannot hold that the company acts improperly in refusing to accept Mr. Hanley's offer to install a meter at his own expense, even though the title to the meter should be with the water company. Should Mr. Hanley's offer be accepted, similar offers from others would have to be accepted also. This would create a discrimination in favor of these who could conveniently purchase meters, and would necessarily cause a difference to exist in their relations with the company compared with the relations of those whose meters were paid for by the company. A discrimination of this kind would be of questionable legality and could not be approved by the Board.

It is not the understanding of the Board that the company takes the position that it will not supply metered service to Mr. Hanley. It claims, and supports this claim, by the uncontradicted testimony of its general manager, that it is installing meters as rapidly as it can, and it appears that in time Mr. Hanley's residence will be afforded metered service.

Giving due consideration to all the conditions existing, the Board is of the opinion that it would not be justified at the present time in ordering the company to install a meter at Mr. Hanley's residence or in requiring the company to accept Mr. Hanley's offer to install a meter at his expense.

The complaint, therefore, will be dismissed.

The Board will, however, keep in touch with the situation at

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Point Pleasant. Prior to the opening of the summer season for 1918, it will require a report to be made as to the conditions then existing with respect to the installation of meters. If it appears *prima facie* that the plans of the company will not make reasonable progress in this direction, the matter will be reopened for further hearing.

Dated November 13th, 1917.

No. 481.

IN THE MATTER OF THE APPLICATION OF THE ATLANTIC CITY
SUBURBAN GAS AND FUEL COMPANY TO ACCEPT THE SURRENDER OF THE LEASE MADE WITH THE PLEASANTVILLE
HEAT, LIGHT AND POWER COMPANY.

1. A company owning and operating a gas plant and electric plant leased all its property to another public utility upon certain terms and conditions, among which was the payment of \$6,250 annual rental.

2. The lessee being unable to pay the rental and being without credit the Board is asked to approve surrender of the lease.

3. As the two companies have substantially the same stockholders officers and directors and the surrender of the lease reduces operating costs and eliminates the annual rental, the surrender is approved on condition of continued operation of both gas and electric plants.

Joseph Thompson, for the petitioner.

The petitions of the Pleasantville Heat, Light and Power Company and of the Atlantic City Suburban Gas and Fuel Company request the approval of this Board of the surrender of a lease made by the Atlantic City Suburban Gas and Fuel Company to the Pleasantville Heat, Light and Power Company.

Section 18, paragraph (h) of the act concerning public utilities (*P. L. 1911, p. 374*) provides:

"18. No public utility as herein defined shall: (h) without the approval of the Board sell, lease, mortgage, or otherwise dispose of or encumber its property, franchises, privileges or rights, or any part thereof, nor merge or con-

Atlantic City Suburban Gas and Fuel Co.—Surrender of Lease.

solidate its property, franchises, privileges or rights, or any part thereof, with that of any other public utility as herein defined. Every sale, lease, mortgage, disposition, encumbrance, merger or consolidation made in violation of any of the provisions hereof shall be void and of no effect. Nothing herein contained shall be construed in anywise to prevent the sale, lease or other disposition by any public utility as herein defined of any of its property in the ordinary course of its business."

It appears that on December 26th, 1908, the Atlantic City Suburban Gas and Fuel Company, a corporation organized under the laws of the State of New Jersey, then owning and operating a gas plant and also an electric plant at Pleasantville, New Jersey (the ownership of the electric company being through the ownership of the capital stock of the Pleasantville Electric Company), leased all its property, both gas and electric plants, to the Pleasantville Heat, Light and Power Company for the term of ninety-nine years, upon certain terms and conditions, among which was the payment of \$6,250 annual rental.

The three corporations herein named have practically the same stockholders, same officers and same directors.

The Pleasantville Heat, Light and Power Company, under the lease, entered into possession of both the gas and electric plants, and still continues to operate, pending the determination of this application.

It appears, also, that when the Pleasantville Heat, Light and Power Company took possession of the plants, the plants were in bad condition; so much so that the company was compelled, in addition to \$50,000 paid in cash into its treasury, to expend on the plants approximately \$146,000 (which was advanced by one Savery Bradley, its president), and now has floating debts of about \$8,000, besides about \$31,000 interest unpaid to Savery Bradley, but which he canceled. Moreover, the company did, on August 1st, 1917, default in the payment of the annual rent of \$6,250 and the operating loss approximates \$10,000 per year.

The company is without credit save through the influence of Savery Bradley, its president, and he declines to advance or be responsible for further sums.

In the circumstances, rather than require the Atlantic City Suburban Gas and Fuel Company to take legal proceedings to repossess itself of the property, the stockholders, as well as the di-

Ocean City v. West Jersey and Seashore Railroad Co.

rectors of each company, adopted resolutions in which the Pleasantville Heat, Light and Power Company offered and the Atlantic City Suburban Gas and Fuel Company accepted the surrender of the lease.

The Atlantic City Suburban Gas and Fuel Company has assured this Board, however, that upon the approval of the surrender of the lease it will operate both the gas and the electric plants.

Hearing upon notice was had at Trenton, Tuesday, October 16th, 1917, and testimony was taken.

The Board has duly considered this application, and in view of the fact that the Atlantic City Suburban Gas and Fuel Company will operate both the gas and the electric plants, which means practically the same operation as that of the Pleasantville Heat, Light and Power Company, both companies having substantially the same stockholders, officers and directors, and, moreover, since the surrender of the lease reduces the operating costs by eliminating the payment of the annual rental of \$6,250, this Board will grant approval of the surrender of the lease by the Pleasantville Heat, Light and Power Company, lessee, to the Atlantic City Suburban Gas and Fuel Company, lessor.

The Board's approval, however, will be granted upon the express condition that the Atlantic City Suburban Gas and Fuel Company will immediately operate both the gas plant and the electric plant.

Dated November 13th, 1917.

No. 482.

IN THE MATTER OF THE APPLICATION OF OCEAN CITY FOR PERMISSION TO EXTEND 55TH STREET ACROSS THE TRACKS OF WEST JERSEY AND SEASHORE RAILROAD COMPANY AT GRADE.

Consent to the construction of a highway crossing of a railroad at grade is given, it appearing that such crossing is essential to the growth and development of the community and that the stopping of trains at a nearby station will reduce the hazard.

Ocean City v. West Jersey and Seashore Railroad Co.

Andrew C. Boswell, for Ocean City.

James Buckelew, for W. J. & S. S. R. R. Co.

Application is made by Ocean City for permission to extend Fifty-fifth Street, in Ocean City, across the tracks of West Jersey and Seashore Railroad Company at grade. The application is under section 21, chapter 195, Laws of 1911, which provides:

"No highway shall be constructed across the tracks of any railroad company at grade * * * so as to make a new crossing at grade, * * * without first obtaining therefor permission from the Board."

From the testimony it appears that a road is being built by the County at a cost of approximately \$200,000, from Ocean City to Sea Isle City, which is to form a part of the Ocean Boulevard from New York to Cape May. It is planned to construct this road to where 55th Street extended will connect with same. The approach from Ocean City will be by means of said 55th Street. It further appears that there is a settlement in the vicinity of said street; that the railroad company has a station at said street; that between 51st Street and the Corson Inlet end of the Island there is no street across the tracks. The company urged that the road be extended so that it connect with 51st Street, which now crosses the tracks of the West Jersey and Seashore Railroad Company, but does not cross the tracks of the Atlantic City Railroad Company, which has a station at 51st Street. This plan would involve considerable expense to purchase the necessary land and build 2,600 feet of road. It was testified that the meadow between 51st and 55th Streets was not as good for the purpose and that considerable expense would be involved in order to get the proper foundation. It is obvious that the settlement below 51st Street must eventually have reasonably convenient access to this new road and that the growth and development of that section of the city requires a crossing over the tracks. The stopping of trains at the 55th Street station serves to reduce somewhat the hazard of the proposed crossing, because trains will be operated under slower speed over the crossing than might otherwise be the case. There is no station of the West Jersey and Seashore Railroad Company at 51st Street.

Riverton and Palmyra Water Co.—Permission to Issue Stock Dividend.

Under all the circumstances, the Board concludes that permission should be granted to extend 55th Street across the tracks of the West Jersey and Seashore Railroad Company at grade. Upon satisfactory proof that 55th Street is a legal highway, where it crosses the tracks of the West Jersey and Seashore Railroad Company, a certificate will issue accordingly.

Dated November 13th, 1917.

No. 483.

IN THE MATTER OF THE APPLICATION OF THE RIVERTON AND
PALMYRA WATER COMPANY FOR PERMISSION TO ISSUE
\$125,000 OF CAPITAL STOCK AS A STOCK DIVIDEND.

Application is made by a water company for approval of an issue of \$125,000 of capital stock, it being claimed that this represented assets of the company against which securities have not been issued. The Board finds the investment cost new of the property to be \$190,640, accrued depreciation \$38,128, leaving a present value as a basis for stock issue of \$152,512. Stock heretofore issued and outstanding amounts to \$125,000. The company's net revenue will be sufficient to guarantee a reasonable dividend on a total stock issue of \$150,000. Approval is given for an issue of \$25,000 stock to reimburse the company for additions and betterments not capitalized.

Thomas J. Hillery and John G. Horner, for the petitioner.

Under date of June 14th, 1917, the Riverton and Palmyra Water Company filed a petition with this Board requesting the approval of an issue of \$125,000 of capital stock, "representing assets of the company against which no securities have heretofore been issued."

A hearing was held on this petition on October 9th, the company being represented by J. W. Ledoux, as expert witness, and the Board by H. E. Carver, of the Board's Appraisal Department.

With its petition the company submitted a written report on the value of its property made by Mr. Ledoux, subsequently marked as Exhibit P-1 for identification, when the matter came to be

Riverton and Palmyra Water Co.—Permission to Issue Stock Dividend.

heard. From the facts given therein, confirmed by the Board's Inspector, is taken the following:

BRIEF HISTORY OF THE COMPANY AND ITS PLANT.

The water company was incorporated on July 20th, 1888, and works were constructed by contract in 1889 to supply water to the Borough of Riverton, Palmyra Township and Cinnaminson Township. One private line has been laid in Delran Township and one in Chester Township for which no franchise is held.

In the original plant the water was obtained from a large brick curb well, sunk about 60 feet from the Delaware River, on the theory that the river water would be collected by infiltration. This well was 13 feet inside and 16 feet outside diameter by 22 feet 6 inches deep. The quality of the water found was excellent and so much superior to the river water as to lead to the conclusion that the supply was derived from a water-bearing stratum coming from the land side, and not from the river by infiltration. The proximity and the small cost of this collection system has been a decided element in the economical operation of the plant.

The original pumping station was a brick structure 18 feet by 42 feet outside with a slate, gable roof, wooden floors and mill-work, built in 1889. The first equipment consisted of a 1,000,000-gallon duplex pump, a 60-horse-power return tubular boiler and a duplex feed pump and accessories. The brick stack was 69 feet high, 26-inch bore, connected to the boiler by a steel flue.

The original piping system was of patent cement-lined pipe. Connected with same, and just outside of the Riverton Borough line, a 75,000-gallon wooden water tower 75 feet high was built on brick substructure.

In order to obtain additional room for another boiler and coal storage, the old station was extended, in 1892, by an ell at the boiler room end and a new 60-horse-power safety boiler was installed, the original boiler being moved to form a battery. In the same year an additional 1,000,000-gallon compound duplex pump was installed.

In 1895, the well was deepened four feet and 125 feet of 18-inch open joint terra cotta pipe was laid from the bottom of the well in the water-bearing stratum westwardly parallel with the river to

Riverton and Palmyra Water Co.—Permission to Issue Stock Dividend.

increase the infiltration area. In 1907, a second extension was made eastwardly 300 feet with the same kind of pipe, both extensions being parallel to and about 60 feet from the river. As the water rises in the well, at times, eight feet above the river level, it is apparent that the water does not come from the river.

In 1897, an additional distribution 397,000-gallon wrought iron standpipe, 30 feet in diameter and 75 feet high, was erected on the same lot as the original water tower; in 1904, the latter was demolished and a new 177,000-gallon wrought iron standpipe, 20 feet in diameter and 75 feet high, was erected on its substructure.

In 1906 and 1907 another addition was made to the station building, the pump room being extended to complete the rectangular shape of the building, and a new 2,500,000-gallon vertical triple expansion duplex pump was installed. The original 60-horse-power return tubular boiler and duplex feed pump were junked and a new 126-horse-power water tube boiler was installed. A masonry wall was also built along the company's water front to prevent infiltration of river water and erosion of the river banks. In 1912, the original 60-horse-power safety boiler was scrapped and replaced by a 125-horse-power water tube boiler, which is now doing service with the 126 horse-power.

To increase the station facilities, an additional pumping station was erected on the river bank about 200 feet below the main pumping station during the year 1915. The building is of brick, 12 by 17 feet outside, on concrete foundations and has a flat slag roof. It houses a triplex power pump geared to a 30-horse-power induction motor so arranged that the latter will automatically start or stop according to the required pressure. The water for this pump is obtained by suction from driven wells, two of which are 10 inches in diameter and 54 feet deep and a third 8 inches in diameter and 52 feet deep; two additional 8-inch wells have been built for future use but not connected with the pumps. During 1916 was constructed a new radial brick stack, 11 feet $7\frac{1}{4}$ inches outside diameter at the bottom and 4 feet diameter at the top and 125 feet high; this will soon replace the brick stack originally built.

From the beginning it has been the policy of the company to require its customers to pay for the installation of service pipes and their maintenance.

Riverton and Palmyra Water Co.—Permission to Issue Stock Dividend.

From a consideration of the above it will be noted that the conditions for low plant and operating costs are very favorable. The collection and pumping system are concentrated on one small plot of land, the pumping equipment is simple, no difficult engineering problems were encountered, the original plant was designed and built by the Pennsylvania Pipe Manufacturing Company, now the American Pipe and Construction Company, under contract, presumably covering engineering and interest.

FINANCIAL HISTORY.

Outstanding Stock.—The following issues of capital stock, duly authorized by the Board of Directors, have heretofore been made:

On July 20th, 1888, an issue of \$50,000 of stock was authorized and \$42,000 issued at par for cash; and \$8,000 additional issued in 1890 for cash.

On May 26th, 1899, an issue of \$25,000 was issued as a stock dividend.

On January 9th, 1908, an issue of \$25,000 was issued as a stock dividend.

On June 10th, 1910, an issue of \$25,000 was issued as a stock dividend.

Of a total authorized capital stock of \$300,000, \$125,000 of capital stock has therefore been issued and is now outstanding, of which \$50,000 was sold for cash, and the remainder of \$75,000 issued as stock dividends. No bonds have been issued.

Knowing the amount of capital stock which has been issued, it now becomes necessary to determine.

THE VALUE OF THE COMPANY'S PROPERTY WHICH IS USED AND
USEFUL.

In his testimony before the Board in this case, Mr. Ledoux followed the report which he had made to the company, marked P-1 for identification. He considered the value of the property from three points of view:

1. By the Wisconsin method of determining "development cost," assuming 9 per cent. basis and modified book figures for extensions, revenue and operating expenses: his value of total investment on 9 per cent. return was \$241,170.11.

2. By inventory and appraisal of tangible and intangible property. (a) The tangible values were determined by the usual method of assigning unit values, based on costs for past ten years, to all the items inventoried, and to the total

 Riverton and Palmyra Water Co.—Permission to Issue Stock Dividend.

so ascertained adding $7\frac{1}{2}$ per cent. for promotion, organization, preliminary engineering and legal expense, and 6 per cent. for engineering and legal expense during construction, a total overhead of $13\frac{1}{2}$ per cent. By this method his

Base value, new, was.....	\$235,447
Depreciation accrued on same.....	28,150
Base value, present value.....	\$207,297
$13\frac{1}{2}$ per cent. overheads.....	27,968
Total present value of tangible property.....	\$235,265
(b) Going value ascertained by the Alvord method...	41,478
Total present value of all property, including services	\$276,743

3. By taking the "present worth" of the estimated revenue for the next thirty years (allowing 1 per cent. for depreciation charge annually) arrived at by discounting each year's net revenue at 8 per cent. compound interest. The value so deduced is stated to be \$270,000.

We will consider these values in order above stated, all as of January 1st, 1917.

1. ACTUAL INVESTMENT AS SHOWN BY THE BOOKS.

Adjusted to Eliminate Errors in Classification.

In his Tables I. and II. Mr. Ledoux set forth the original investment of \$42,000, in 1889, and the improvements and extensions thereto annually, as adjusted by him, amounting to an aggregate of \$162,398.57 gross, no withdrawals being deducted; the sum of these two amounts would indicate \$204,398.57 cost. These figures were checked by the Board's witness and found to be substantially correct for the years 1889 to 1910, inclusive, but incorrect for the subsequent years, not agreeing either with the company's books or the company's annual reports to this Board. Table I. has, therefore, been prepared to make the necessary corrections in capital account and to show in a condensed form the original investment, the annual extensions and withdrawals, the average investment, operating revenues, expenses and net revenues, dividends actually paid in cash and in stock and the annual net earnings in percentage of average capital; no depreciation is taken into account in this percentage except that included in operating as indicated.

Riverton and Palmyra Water Co.—Permission to Issue Stock Dividend.

TABLE I.
BOOK STATISTICS (ADJUSTED).

Year, Jan. 1.	Invest- ment.	Exten- sion during 12 months.	With- drawals during 12 months.	Average Invest- ment.	Oper- ating Ex- penses.	Oper- ating Rev- enues.	Net Earn- ings.	Depre- ciation.	Divi- dends.	Surplus above Divi- dends.	Stock Issued for Cash.	Issued for Divi- dends.	Per Cent. for Earn- ings.
1889	\$42,000	\$6,535	.....	\$45,268	\$2,075	\$2,250	\$175	.....	.....	\$175	\$42,000	.....	0.386
1890	48,535	2,880	.....	40,976	1,885	8,907	1,722	.....	.....	1,722	8,000	.....	3.44
1891	51,515	6,936	.....	54,894	1,820	5,101	3,281	.....	.....	3,281	.....	.....	5.98
1892	58,351	1,904	.....	59,304	1,956	6,187	4,231	.....	.....	4,231	.....	.....	7.13
1893	60,255	1,426	.....	60,989	2,618	7,129	4,511	.....	.....	2,611	.....	.....	7.4
1894	61,681	7,781	.....	65,572	2,021	8,153	6,132	.....	\$2,000	4,132	.....	.....	9.35
1895	61,681	1,698	.....	70,266	3,438	9,058	5,618	.....	2,000	3,618	.....	.....	8.00
1896	69,462	1,698	.....	76,444	3,025	9,710	6,691	.....	2,000	4,691	.....	.....	8.75
1897	71,970	10,747	.....	82,463	2,940	9,585	6,625	.....	2,000	4,625	.....	.....	8.03
1898	83,107	1,390	.....	84,539	3,180	10,414	7,225	.....	2,000	5,225	.....	\$25,000	8.55
1899	85,970	535	.....	86,237	3,480	10,953	7,323	.....	2,000	4,323	.....	.....	8.39
1900	86,903	2,811	.....	87,939	4,807	12,774	8,177	.....	3,700	4,477	.....	.....	8.21
1901	89,374	3,279	.....	91,014	4,152	11,627	7,475	.....	4,125	3,350	.....	.....	8.46
1902	92,653	2,780	.....	94,044	5,253	13,207	7,954	.....	4,500	1,954	.....	.....	6.06
1903	96,433	4,323	.....	96,783	7,868	14,563	6,465	.....	4,500	2,863	.....	.....	8.47
1904	98,152	1,632	\$1,604	98,968	5,865	14,272	8,387	.....	4,500	3,887	.....	.....	9.73
1905	99,764	7,363	.....	103,416	6,107	16,258	10,061	.....	4,500	5,561	.....	.....	6.99
1906	107,047	26,413	1,500	119,654	9,469	17,773	8,364	.....	4,500	3,864	.....	25,000	7.99
1907	132,290	218	.....	132,369	7,330	17,904	10,574	.....	4,125	6,449	.....	.....	9.51
1908	132,478	528	.....	132,740	6,631	19,254	12,623	.....	4,500	8,123	.....	.....	8.58
1909	133,001	6,543	.....	136,273	7,585	19,278	11,693	.....	4,500	7,193	.....	.....	9.65
1910	139,544	11,859	.....	145,474	8,113	22,150	14,092	.....	4,500	9,592	.....	25,000	9.2
1911	151,403	5,539	1,937	153,204	9,608	23,700	18,094	.....	6,250	12,842	.....	.....	11.88
1912	155,905	4,660	.....	157,353	9,912	28,596	18,684	.....	6,250	12,434	.....	.....	10.88
1913	159,665	12,878	.....	166,104	8,737	26,975	16,250	.....	6,250	10,000	.....	.....	10.51
1914	172,543	9,419	.....	177,253	10,339	27,197	16,858	.....	11,250	5,973	.....	.....	9.24
1915	181,962	9,378	700	186,302	11,406	28,719	17,223	.....	.....	.....	.....	.....	.....
1916	190,640	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1917	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total	\$2,931,110	\$154,081	\$5,441	\$2,814,804	\$152,679	\$896,118	\$243,430	\$10,723	\$96,200	\$144,230	\$50,000	\$75,000	8.65

* Also included in operating expenses.

Riverton and Palmyra Water Co.—Permission to Issue Stock Dividend.

Table I. shows that the original plant cost \$42,000, to which net additions of \$154,081 have been added, making a total of \$190,640 after deducting \$5,441 of property withdrawn from service, all as of January 1st, 1917. This is taken to represent the adjusted book cost of the property of the company when new. It is shown hereinafter that the accrued depreciation of the property, reproduction cost new, is about 20 per cent., which may be taken to fairly represent the accrued depreciation of the property on the basis of adjusted book cost; this amounts to \$38,128 which, deducted from \$190,640 value new leaves \$152,512 present value after providing for accrued depreciation.

A development cost calculation, using the data given in Table I., page 6, and 7.8 per cent. interest, will show that the resulting present worth of the required investment would be at least equal to \$152,512. The present value of the property, then, is sufficient on this basis to have provided for all depreciation (20 per cent.) and to have afforded a return of 7.8 per cent. on the investment. As this Board has determined in other cases involving water utilities that 7 per cent. is a fair return, this calculation shows that there is no addition to be made to intangible capital to provide for unearned profits or unearned depreciation.

On page 7 of P-1 Mr. Ledoux states: "There seems to be a tendency among progressive Public Utility Commissions to consider this method as the fairest to the utility and to the public, especially in the case of establishing rates." This remark should be predicated on a showing that the rates actually charged by the utility during the period covered by the investigation have not been extortionate or even unduly high. The company has had but one set of rates since it began operations. They are neither the highest nor the lowest, but have produced a profitable return on the investment of the stockholders, partly owing to economical management and partly owing to low capital costs, especially in the collection system, and to moderate pressures pumped against.

The Board, therefore, finds that on the basis of adjusted book costs the value of the property new of the company for the purposes of this investigation is \$190,640, that the accrued depreciation thereon is \$38,128, and the present value is \$152,512.

Riverton and Palmyra Water Co.—Permission to Issue Stock Dividend.

TABLE II.

SUMMARY OF REPRODUCTION VALUE, APRIL 7TH, 1917; BY J. W. LEDOUX, C. E.

	(Exhibit P-1.)		
	Total Cost.	Amount of* Depreciation.	Present Value.
Distribution piping—159,923 feet....	\$123,189.00	\$3,756.00	\$199,433.00
Specials, 1,201..	1,456.00	36.00	1,420.00
Valves, 203.....	3,071.00	473.00	2,598.00
Hydrants, 158..	4,819.00	1,639.00	3,180.00
Meters, 15.....	736.00	147.00	589.00
Distribution services, 1,577.....	18,683.00	6,006.00	12,677.00
Machinery and plant.....	23,026.00	6,167.00	16,859.00
Steam and exhaust piping.....	988.00	244.00	744.00
Suction and discharge piping.....	1,699.00	620.00	1,079.00
Steam pumping station.....	9,914.00	2,280.00	7,634.00
Electric pumping station.....	995.00	36.00	959.00
Collecting well and infiltration pipes,	5,993.00	1,840.00	4,153.00
Artesian wells.....	1,345.00	30.00	1,315.00
Radial brick stack.....	3,269.00	.....	3,269.00
Improvements (paving and roadways),	1,100.00	63.00	1,037.00
Dwelling and stable.....	4,275.00	1,988.00	2,287.00
Shop and garage.....	440.00	52.00	388.00
River retaining wall and fill.....	4,203.00	92.00	4,111.00
Improvements to standpipe lot.....	220.00	35.00	185.00
Two standpipes and foundations.....	10,104.00	2,646.00	7,458.00
Small equipment on hand.....	2,047.00	.....	2,047.00
Real estate and right of way.....	13,875.00	.....	13,875.00
	<u>\$235,447.00</u>	<u>\$28,150.00</u>	<u>\$207,297.00</u>
Promotion, organization, preliminary engineering and legal ex- penses, 7½ per cent.			\$15,530.00
Engineering and legal expenses during construction up to date, 6 per cent.			12,438.00
Going value, 17.6 per cent.....			41,478.00
			<u>\$276,743.00</u>

*On basis of 4 per cent. sinking fund.

Riverton and Palmyra Water Co.—Permission to Issue Stock Dividend.

TABLE III.

GRAND SUMMARY OF THE PROPERTY OF THE COMPANY, AS APPRAISED BY THE BOARD'S VALUATION DEPARTMENT, SHOWING COST TO REPRODUCE, ACCRUED DEPRECIATION, PRESENT VALUE.

Ref.	Acc. No.	Description.	Net Cost Total.	Addition.		Cost to Reproduce.	Depreciation.		Present Value.
				%	Amount.		%	Amount.	
1	106	Reservations	\$6,662	12.5	\$833	\$7,495	....	.....	\$7,495
1	109	Springs and wells	6,779	13.85	941	7,720	17.4	\$1,345	6,375
1	110	Infiltration gallery	4,480	12.5	560	5,040	17.45	879	4,161
2	121	Pumping station	16,518	13.0	2,148	18,666	....	1,820	16,846
2	122	Steam power pumping equipment..	20,959	11.3	2,372	23,331	41.7	9,313	14,018
1	124	Electric power pumping equipment,	3,325	7.5	250	3,575	3.33	119	3,456
1	128	Storage reservoirs, tanks and stand- pipes	16,417	12.5	2,052	18,469	30.0	5,541	12,928
1	129	Distribution mains	117,132	12.5	14,643	131,775	19.4	25,561	106,214
1	131	Meters	900	2.56	23	923	10.5	97	826
1	132	Hydrants	5,767	12.5	721	6,488	37.3	2,420	4,068
1	134	General structures	5,097	12.5	635	5,732	21.1	1,209	4,523
1	135	General equipment	1,220	5.0	60	1,280	10.2	131	1,149
			\$205,256	12.3	\$25,238	\$230,494	21.0	\$48,435	\$182,059
14	129	Expenditures January 1st to April 1st, 1917, per company's books ..				1,669		.....	1,669
		Total tangible fixed capital as of April 1st, 1917				\$232,163		\$48,435	\$183,728

Riverton and Palmyra Water Co.—Permission to Issue Stock Dividend.

2. VALUE OF PROPERTY ON BASIS OF REPRODUCTION NEW.

The Board's appraisal engineer assembled his inventory and appraisal in accordance with the Uniform System of Accounts for Water Utilities prescribed by the Board, whereas Mr. Ledoux did not follow this system. The summary of each is, therefore, given, Mr. Ledoux's being shown in Table II., and that of the Board's engineer in Table III.

Reference to Table II. will show that the total cost of labor and material on the basis assumed is \$235,447; from this the amount of accrued depreciation on a 4 per cent. sinking fund basis is \$28,150, leaving \$207,297 as the present value cost new of labor and materials. To this he adds 7½ per cent. overheads for Promotion, Organization, Preliminary Engineering and Legal Expenses and 6 per cent. for Engineering and Legal Expenses during Construction, the total overheads being \$27,968 and the total present value of tangible property being \$235,265. In this, however, is included the estimated cost of 1,577 services not installed nor paid for by the company, the present value of which, with overheads of 13.5 per cent., is \$14,388. Omitting these services, the present value of the tangible property, by Mr. Ledoux's estimate, is \$220,877.

INTANGIBLE VALUES.

Following the method of Alvord & Metcalfe, Mr. Ledoux worked out a Going Concern Value of \$41,478 on a six-year program. This method involves the assumption that the revenue received by the utility is a reasonable one. Very frequently this is the very fact to be determined. Moreover, so many factors have to be assumed that no two experts working independently would give the same answer. The presiding commissioner criticised this method in the following words (Testimony, page 33): "It seems to me, under his method, the greater the value, the greater the earnings, and it would be constantly building up, because the more the company earned the greater the value of the property when added to the going value. Therefore, he would have greater value and greater earnings. When one would increase the other would go

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up correspondingly, and go on pyramiding 'as high as the traffic would bear.'" Mr. Ledoux stated: "It is one of the methods of figuring which a great many courts and commissions think is the right method. I have my doubts about it myself. Personally, I don't believe in it." Under the theory of regulation this method would appear to have only a limited value.

In this connection attention is directed to the fact that this Board is of the opinion that intangible values must have some reasonable relation to the tangible values with which associated.

In the more recent decisions rendered by this Board, such as that of Township of Mantua *v.* New Jersey Gas Company, and in the matter of hearing as to whether the schedule of rates of the Hackensack Water Company was just and reasonable, the intangible values as found did not, in either case, exceed five per cent. of the value new of the tangible property, excluding from intangibles development cost, which, as before shown, does not enter into the case under consideration.

The total present value, then, of the tangible and intangible property, as shown by Mr. Ledoux, including services, by this method, was \$276,743, or, excluding services, \$262,355.

Reference to Table III. will show that the Board's Engineer estimated the cost to reproduce new the tangible property of the company at \$230,494, including overheads of 12.3 per cent.; the accrued depreciation thereon, on the straight line basis, was \$48,435, leaving a present value of \$182,059, as compared with Mr. Ledoux's figure of \$220,877 with depreciation on the sinking fund basis. If Mr. Ledoux had taken 21 per cent. on the straight line basis for depreciation (omitting services also) his present value would have been \$194,388. The difference would be about 5 per cent.

With \$194,388 as the upper limit and \$182,059 as the lower limit, the Board is of the opinion that the mean of these two values; that is to say, \$188,000 is the fair present value of the tangible property of the company on January 1st, 1917, on the basis of reproduction new.

As to intangible values, the evidence before the Board is of such an indefinite character that no conclusion will be presented with respect thereto.

Riverton and Palmyra Water Co.—Permission to Issue Stock Dividend.

3. PRESENT WORTH BASED ON THIRTY YEARS.

Assumed Future Net Revenue (Eight Per Cent. Discount).

On pages 28 and 29 of Exhibit P-1, the company's witness assumes that the net revenues experienced in the past may be projected forward for thirty years and the present value of this revenue taken to be the "market value" (P-1, page 12). This calculation does not appear to have much evidential value. The result will be changed if we take more or less than thirty years or if, under regulation, the net revenue be decreased or increased as compared with the historical net revenue from which Mr. Ledoux deduces his future revenue.

THE BASIS TO BE TAKEN FOR STOCK ISSUE ASKED.

In view of the above recapitulation of the facts developed in this case, the question now becomes pertinent as to which of the three basis shall be taken for the purposes of arriving at the value of the property upon which the issue of stock shall be predicated.

Basis No. 3 will be discarded for the reason that it does not take into consideration either the property which is used and useful, nor the proper relation of net revenue to a fair return on the property used and useful. Furthermore, it assumes that the revenue of the utility is to be continued on the present basis, whether found just, deficient or excessive.

Basis No. 2 is frequently considered in rate cases but does not necessarily or usually represent the investment in dollars made by the stockholders.

Basis No. 1, as nearly as the Board can determine from the facts before it, represents the investment value of the property of the company. If the approval now sought were for an issue of stock based on extensions made during the last two or three years, it is doubtful if any other figures than those representing the actual costs would be submitted by the company for the Board's consideration. It appears reasonable, therefore, to extend the same theory so as to cover the longer term of years involved in this application. This leads to the selection of basis No. 1 by the Board.

 Bridgeton and Millville Traction Co.—Discontinuance of Tickets.

The Board accordingly finds as follows:

As of January 1st, 1917,

The investment cost new of the company's property was	\$190,640
The accrued depreciation thereon was.....	38,128
<hr/>	
The present value of same as a basis for a stock issue was	\$152,512
The stock heretofore issued and outstanding is.....	125,000
<hr/>	
Excess of investment over stock issued.....	\$27,512

It appears to be undoubtedly a fact that the company's net revenue will be sufficient to guarantee a reasonable dividend on a total stock issue of \$150,000.

Now, therefore, after due consideration of the record and of all the facts in this case, the Board will approve the issue by the Riverton and Palmyra Water Company of \$25,000 of its capital stock to reimburse it for the additions and betterments to plant and system not heretofore capitalized, with the understanding that its books of account shall be made to reflect the findings as to capital and the accrued depreciation thereon above set forth.

A certificate of approval consistent herewith will issue.

Dated November 19th, 1917.

No. 484.

**IN THE MATTER OF THE PROPOSED DISCONTINUANCE BY THE
BRIDGETON AND MILLVILLE TRACTION COMPANY OF THE
SALE OF TICKETS AT A REDUCED RATE.**

1. The Board is not the proper forum to litigate the validity of legislative enactments. It is an administrative body.

2. Withdrawal of tickets sold at the rates of six for 25 cents and fifty for \$2.00, one of which tickets is accepted as the equivalent of a fare of five cents, would result in an increase in charge and an alteration of an existing classification of rates and charges.

Bridgeton and Millville Traction Co.—Discontinuance of Tickets.

3. A public utility should be allowed to earn enough revenue to provide for reasonable operating expenses, sufficient to provide for conducting its business and for current repairs and maintenance; for taxes imposed upon it; for annual depreciation accruing over and above current repairs and maintenance, in order to preserve investment intact, and to provide a return on investment sufficient to command needed capital.

4. An electric railway which has had average earnings of less than 5 per cent. per annum on its investment is allowed to increase its rates.

H. B. Gill, for the petitioner.

Louis H. Miller, for the City of Millville.

The Bridgeton and Millville Traction Company submitted for filing a passenger tariff effective August 6th, 1917; the effect of which tariff would be to abolish tickets heretofore sold six for 25 cents and fifty for \$2.00. The tickets, withdrawal of which was proposed, have been and are sold as mentioned above and each ticket has been and is accepted as the equivalent of a 5-cent fare. The Board entered an order suspending the increase in the existing individual and special rate, and the change or alteration of the existing classification, as proposed by the company and called a hearing thereon. Testimony was taken and by stipulation the order of suspension continues in effect until November 20th without waiving the objections on the part of the company to the power of this Board to make the original order of suspension.

The City of Millville through its counsel appeared and protested against the discontinuance of the "six tickets for 25 cents," and also asked leave to file an intervening petition for the purpose of alleging the present rates charged by the Bridgeton and Millville Traction Company for the transportation of persons and property over its lines are unjust and unreasonable; and that the service rendered by the company is inadequate, in that it has permitted its tracks, poles and transmission lines to deteriorate so that travel over its lines is no longer safe to the public.

The Board is of the opinion that the question of adequate service cannot properly be passed upon under the proofs before us and any attempt to do so would be wholly unsatisfactory, because the necessary detailed information required for the purpose of making a finding on the charge of inadequate service and deterioration of property is lacking.

Bridgeton and Millville Traction Co.—Discontinuance of Tickets.

Counsel for the Bridgeton and Millville Traction Company did, however, stipulate and agree that the evidence taken in this proceeding might be used in such separate proceeding as evidence taken therein. Numerous ordinances obtained by the traction company from the several municipalities it serves were offered in evidence. There is no reference in any of them to the rate of fare to be charged excepting the ordinance of the City of Bridgeton granting a franchise to the Bridgeton Rapid Transit Company, which contains a provision that the rate of fare shall not exceed 5 cents. The present case therefore does not raise the question of the contractual obligations between the traction company and municipalities that were discussed in the cases of the Trenton and Mercer County Traction Corporation and the Northampton, Easton and Washington Traction Company. The company insists that this Board has not the power to make an order suspending the proposed action of the company in the discontinuance of the sale of tickets for a less fare than 5 cents or to compel it to continue to sell tickets at less than the rate of 5 cents for each fare. It urges that the Board is not vested with any such power by virtue of the act of April 21st, 1911, creating the Board of Public Utility Commissioners (*P. L. 1911, p. 374*), and that if the said act attempts to confer such power upon this Board, the act is repugnant to the Constitution of the United States, and, therefore, void. The complete answer to the first objection raised is: Clause (h) of Section 17 of the act creating this Board (*idem*):

"(h) When any public utility as herein defined shall increase any existing individual rates, joint rates, tolls, charges or schedules thereof, as well as commutation, mileage and other special rates, or change or alter any existing classification, the board shall have power either upon written complaint or upon its own initiative to hear and determine whether the said increase, change or alteration is just and reasonable. The burden of proof to show that the said increase, change or alteration is just and reasonable shall be upon the public utility making the same. The board shall have power pending such hearing and determination to order the suspension of the said increase, change or alteration until the said Board shall have approved said increase, change or alteration, not exceeding three months."

In the case of the *Trenton and Mercer County Traction Corporation v. City of Trenton*, Vol. 101, *Atl. Rep.* 562, our Supreme Court said:

Bridgeton and Millville Traction Co.—Discontinuance of Tickets.

"We think it clear that the Public Utility Commission had jurisdiction under section 17, paragraph (h) of the Act P. L. 1911, page 380. The withdrawal of the sale of six tickets for a quarter was an increase of an existing rate under which 82 per cent. of the passengers carried paid a fare of only four and one-sixth cents; by the proposed withdrawal they would be forced to pay a fare of 5 cents."

In the present case the withdrawal of the sale of six tickets for 25 cents was an increase of existing rate under which about 74 per cent. of the passengers carried paid a fare of only 4 1-6 cents. By the proposed withdrawal they would be forced to pay a fare of 5 cents. The situation is identical. Our answer to the attack on the constitutionality of the act creating the Board, or any section thereof, is, that this is not the proper forum to litigate the validity of legislative enactments. This as an administrative Board.

It may be stated in passing, however, that the petitioner contends that under the decision of the United States Supreme Court, in the case of *Lake Shore and Michigan Southern Railway Company v. Smith*, 173 U. S. 684, the State cannot require a railway company to sell tickets good for a number of trips at a lower rate per trip than the reasonable rate for a single trip.

The United States Supreme Court, in a decision delivered October 15th, 1917, in the case of *Pennsylvania Railroad Company, Lessee, v. Albert G. Towers et al.*, said, referring to the Lake Shore and Michigan Southern Railway Company case:

"The views therein expressed, which are inconsistent with the right of the states to fix reasonable commutation fares when the carrier has itself established fares for such service, must be regarded as overruled by the decision in this case."

Counsel for the petitioner did not have the benefit of this decision in preparing his brief, as the decision was not announced until after the brief was submitted to the Board.

In the judgment of the Board the proposed withdrawal of tickets would result in requiring the users of such tickets to pay a higher charge or rate for carriage on the cars of the company and involves an increase in the charge or rate to be paid by them for such service, and further involves a change or alteration in the existing classification of rates and charges.

This Board has always held, and the New Jersey Supreme Court has recently decided, that it has jurisdiction over the subject-matter herein discussed, and the question before us is, therefore, whether the proposed increase, change or alteration in charge, rate

Bridgeton and Millville Traction Co.—Discontinuance of Tickets.

or classification is just and reasonable. For the determination of this question we will consider the proofs before us.

The company was incorporated in the year 1893. The present owners paid \$200,000 in cash, the par value of the stock of the new company which then owned between 12 and 13 miles of track, a power house and equipment. This, upon the mileage stated, represents between sixteen and seventeen thousand dollars per mile. It further appears that all the additional securities which have since been issued were issued for cash, the stock at par and the bonds at above 90 per cent. of their face value. The cash received was actually expended upon the construction of the road and its improvement, except \$250,000, which was invested in the bonds of the Bridgeton Electric Company and used in the construction of a power house for the joint use of the two companies under an agreement which is in evidence. The money thus expended was secured by the ownership of a like amount of bonds of the electric company.

Earnings of the company in each year, from 1900 to the year ending June 30th, 1917, show no substantial increase. In 1907 the gross earnings of the company were \$121,357.48, as compared with \$121,252.94, in 1917. During the said period of ten years they were as low as \$107,891.90, in 1901, and as high as \$125,897.92, in 1913. The operating expenses have increased \$12,500, while the revenue has remained practically the same. In 1907 the operating expenses for the same gross receipts were \$89,902.05 as compared with \$101,605.21, in 1917. Of this increase \$8,000 has been in wages.

A large part of the right of way of the company extends through a sparsely settled territory, which from the testimony produced and the comparison of the gross receipts from year to year does not appear to be growing very rapidly.

The company admits that the railroad between Bridgeton and Millville is not in good condition, that it is rough and needs relaying. It further claims that by foregoing any payment of dividends, it is endeavoring to put itself in financial position to meet required expenditures for the correction of these conditions.

The situation which confronts the company is:

Its net income for the year ending July 30th, 1917, was \$12,535.77. The wages of its passenger conductors and trainmen for these six months increased \$486; of its passenger motormen,

Bridgeton and Millville Traction Co.—Discontinuance of Tickets.

\$563; of its freight and express conductors, \$105; and its car-house employees, \$82. Further increases in wages, one in July and one in September, amount to approximately \$9,000 annually. The Bridgeton Electric Company is now charging this company 2c. per K. W. H. for power, which is an increase of 60 per cent. in the old charge for power, made necessary by the abnormal cost of coal.

The company has paid no dividends for the past two years. Its average rate of dividends earned for the past two years has been 1.86 per cent. on its capital stock. It faces the necessity of large expenditures, some at least of which will be chargeable to capital.

A public utility should be allowed to earn enough revenue to provide for the following outgo, viz.:

(1) Reasonable operating expenses sufficient to provide for conducting its business and for current repairs and maintenance;

(2) Taxes imposed upon it;

(3) A sum sufficient to provide for annual depreciation accruing over and above current repairs and maintenance, in order to preserve investment intact;

(4) A return on investment sufficient to command needed capital.

It must have items (1) and (2) very early in its history; items (3) and (4) are frequently not received until the utility is fairly well developed. But, in the long run, all four items must be earned by the utility; if not, its capital becomes impaired; it cannot secure money for replacements or extensions, and it will cease to furnish the service for which it is organized, and the public will be deprived of such service.

The table following shows what would be the fair value of the property of this company if its original investment were kept intact, if it had earned only 5 per cent. (less than the legal rate of interest in this State) on its investment from 1900 to 1917, inclusive. This is based on the figures shown in Exhibits P-3 and P-4, eliminating the investment of \$250,000 in the bonds of the Bridgeton Electric Company, and eliminating interest payments from net income. The bonds are included at par, as the interest rate of 5 per cent. will not be sufficient to amortize any bond discount, which is chargeable against a fair return. As a floating debt existed from 1903 to 1907, inclusive, Fixed Capital is taken as a base for those years.

Bridgeton and Millville Traction Co.—Discontinuance of Tickets.

TABLE I.

PERIOD. (1)	Capital.		Addition for Year. (4)	Average Capital for Year. (5)	5% on Average Capital. (6)	Net Income Eliminating Interest. (7)	Profit or Loss Over 5% Return. (8)	Investment by F-3 and Testimony.
	July 1. (2)	June 30. (3)						
1900-1901	\$200,358	\$201,215	\$99,642	\$250,179	\$12,509	\$21,204	\$8,785	\$300,000
1901-1902	291,215	277,180	.....	291,215	14,561	28,596	14,035	300,000
1902-1903	277,180	567,506	.....	422,960	21,150	22,445	1,295	591,621
1903-1904	567,506	587,406	201,621	573,318	28,666	20,391	8,265	603,246
1904-1905	587,406	602,201	11,625	590,558	29,528	21,087	8,491	600,550
1905-1906	602,201	614,677	6,304	606,000	30,303	25,545	4,758	617,268
1906-1907	614,677	624,614	7,718	617,465	30,873	28,512	2,361	622,844
1907-1908	624,614	767,168	5,576	688,192	34,410	10,012	15,398	750,000
1908-1909	767,168	790,519	127,156	767,168	38,258	15,007	23,251	750,000
1909-1910	790,519	817,435	.....	790,519	39,526	12,610	26,916	750,000
1910-1911	817,435	838,306	.....	817,435	40,872	20,001	20,871	750,000
1911-1912	838,306	859,571	.....	838,306	41,915	20,660	21,245	750,000
1912-1913	859,571	885,107	.....	869,571	42,979	27,543	5,436	750,000
1913-1914	885,107	897,862	.....	866,067	43,350	20,365	22,885	750,000
1914-1915	897,862	921,556	.....	887,862	44,393	10,669	33,664	750,000
1915-1916	921,556	946,259	.....	921,556	46,078	19,375	26,703	750,000
1916-1917	946,259	970,636	.....	946,259	47,413	25,096	22,377	750,000

Bridgeton and Millville Traction Co.—Discontinuance of Tickets.

Column 3 for 1917 shows that the company would be entitled to a capital of \$970,636 of property, value new, in order to have earned 5 per cent. from its start, as shown in the table. It cannot be considered as unreasonable if the lower base of \$500,000 in stock and \$250,000 in bonds (one-half the total outstanding) is taken. An adjustment of the figures in Exhibit P-4 will show \$26,035 as the return on \$750,000 capital. This is a return of 3.47 per cent.

It is claimed that the revenue will be increased, substantially, \$16,875, if permission to withdraw the tickets in question be granted. Even if expenses do not increase by the amount of \$18,000 annually, as testified by Mr. Tingley, this \$16,875, added to the \$26,035 actually received during the last fiscal year shown, would give a total return of \$42,910, which is 5.72 per cent. of the capital base of \$750,000. If, on the other hand, the expenses increase by \$18,000, as claimed, the increase, by reason of the new schedule, will be more than absorbed, and the net return will be substantially 3 1-3 per cent.

If it be alleged that the company should have spent a larger sum in maintenance of its property, it could only have done so out of the earnings received, which averaged much less than legal interest, or by investment of more capital. The latter would have increased the base upon which a return should be earned, and, unless such maintenance increased revenue, it would have resulted in a still lower percentage return on the capital devoted to public use.

In determining whether the discontinuance of the sale of six tickets for twenty-five cents should be permitted, the need of additional revenue to meet public requirements, especially for better service, must be given consideration. The present high cost of operation shows no sign of recession. The Board must meet existing conditions in a practical manner. We will, therefore, permit the proposed tariff as submitted to become effective.

Should the City of Millville desire further opportunity to present additional proof as to the condition of the company's physical property, and the inadequacy of the service furnished by said railway, full opportunity will be given for that purpose.

Dated November 19th, 1917.

Clinton Water and Water-Supply Co.—Approval of Mortgage, Issue of Bonds.

No. 485.

IN THE MATTER OF THE APPLICATION OF THE CLINTON WATER
AND WATER SUPPLY COMPANY, FOR APPROVAL OF MORT-
GAGE AND ISSUE OF BONDS THEREUNDER.

Approval is given to a mortgage as security for bonds in the amount of \$50,000 and the issuance thereunder of bonds in the amount of \$20,000 at par for the purpose of retiring outstanding bonds in a similar amount, maturing November 1st, 1917, upon condition that the company set aside not less than \$500 each year and carry this amount under the proper account on its books.

Foster M. Voorhees, for the petitioner.

Grover C. Richman, for the Board.

The Clinton Water and Water Supply Company (a corporation of the State of New Jersey), located at Clinton, N. J., supplying water in Clinton and the neighboring territory of Annandale, applies for the approval of a mortgage bearing date November 1st, 1917, made to the Somerville Trust Company, and the issuance of bonds in the amount of \$20,000 thereunder.

It appears that the proposed mortgage covering the property of the company is given to secure bonds in the amount of \$50,000, of which bonds in the amount of \$20,000 are to be issued for the purchase, payment and retirement of bonds in the amount of \$20,000 previously issued by the Clinton Water and Water Supply Company, bearing date November 1st, 1897, and due November 1st, 1917, and secured by mortgage dated the same day, covering its property and franchises made to the Manhattan Trust Company; and that the proposed mortgage is for said purpose and also for the further purpose of paying the costs of extensions, improvements, reconstruction of equipment and betterment and enlargement of the company's plant, and the acquirement of lands, water and water rights in connection therewith.

It further appears that the proposed issue of the bonds in the sum of \$20,000 will bear interest at five per cent. and will mature in twenty years, with interest payable in May and November of

Clinton Water and Water-Supply Co.—Approval of Mortgage, Issue of Bonds.

each year, and that the present issue is for the sole purpose of retiring outstanding bonds in a similar amount, sold for par, and maturing on November 1st, 1917, by exchanging the same for the new bonds at par.

The book value of the company's plant was given at the hearing as \$41,007.57, but no appraisalment of the plant had been made for the purpose of the application and the matter was taken into conference, subject to the report of the accounting department as to the value of the plant and other necessary matters pertinent to the application. It appears from the report of the Board's statistician and accountant that the financial data given in the application agrees entirely with the company's annual reports previously filed, and that the book value of the entire property is reported to be \$41,007.57, as testified at the hearing, which amount is slightly in excess of the present total outstanding capitalization, namely, \$40,000, consisting of \$20,000 par value of capital stock, and \$20,000 par value of mortgage bonds, which it is now proposed to refund by a new issue of an equal amount; that the company's annual report contains a fairly good inventory of its physical property, and by applying normal unit prices, an approximate reproduction value new would amount to \$42,641, or about \$1,600 in excess of the book value of the property; that the company is not overcapitalized, and that there have been invested in the plant expenditures equal to the par value of the present outstanding securities, all of which had been issued prior to the existence of the Board; that the bonds of the proposed new issue bear interest at the rate of five per centum per annum, the same as the old bonds, and as testified to at the hearing, are to be sold or taken at par, resulting in the company's fixed annual charge of \$1,000 for bond interest, or its equivalent, to continue as heretofore.

It appears further from the reports of the company on file with this Board that the company has during each of the past six years paid 7 per cent. dividends on this capital stock, and has had left, after the payment thereof, an average of \$600 per year, most of which it has invested in extensions or additions to its plant and equipment. This amount is somewhat in excess of a proper allowance for estimated annual depreciation, for which the company, however, has not made any provision in its account, as should be

Delaware and Atlantic Telegraph and Telephone Co.—Justice of Rates.

done in strict compliance with the accounting regulations prescribed by the Board for water utilities.

There is doubtless no question of the company's ability to earn the interest on the proposed new issue of the bonds.

The Board will, therefore, approve the mortgage given as security for bonds in the amount of \$50,000, as submitted, and the issuance thereunder of bonds in the amount of \$20,000 at par, for the purpose of retiring outstanding bonds in a similar amount, maturing November 1st, 1917, and which, with the mortgage given to secure the same are to be surrendered and canceled. Approval, however, is made upon condition that the company set aside not less than \$500 each year to provide a reserve for depreciation and carry this amount under the proper account on its books.

Dated November 20th, 1917.

No. 486.

IN THE MATTER OF THE INQUIRY AS TO THE JUSTICE AND REASONABLENESS OF RATES OF THE DELAWARE AND ATLANTIC TELEGRAPH AND TELEPHONE COMPANY.

Rates which produce a return of less than three per cent. on the physical value of the property of a utility cannot be held to be excessive,

L. Edward Herrmann and Frank H. Sommer, for the Board.

Robert V. Marye and John L. Swayze, for the Delaware and Atlantic Telegraph and Telephone Company.

The Board, on March 28th, 1916, of its own motion, initiated this proceeding to determine whether the rates of Delaware and Atlantic Telegraph and Telephone Company yielded more than a just and reasonable return on the fair value of the company's property in 1916.

Delaware and Atlantic Telegraph and Telephone Co.—Justice of Rates.

1. VALUE OF PROPERTY.

The property and rates of this company were considered by this Board in a proceeding which resulted in a report and order dated January 7th, 1913. In that report the company's investment in plant and plant assets measured by a fair estimate of Replacement Cost New as of August 31st, 1911, is given for the physical property. The same report assigns non-physical values and values for materials and supplies and cash working capital. It also discusses depreciation. The figures arrived at in the report are:

Physical property, reproduction new, August 31st, 1911.....	\$5,756,460
Materials and supplies (called supplies in report).....	53,000
Cash working capital	150,000
Total plant and plant assets.....	\$5,959,460
Non-physical value	797,800

Depreciation is discussed at some length in that report. It is pointed out that Mr. Hayward (engineer of the company at that time) estimated the loss of value due to wear and tear at from \$500,000 to \$600,000 and 10 per cent. (*i. e.*, a figure corresponding approximately to Hayward's figure) is stated to be "the very minimum figure that could be attached to accrued depreciation."

The Board finds that \$1,419,287 (*i. e.*, 25 per cent. of the depreciable property) is a "fair estimate of the total accrued depreciation."

The depreciable items of property are all items except Land, Cash Working Capital and Supplies. Therefore, the present values as of August 31st, 1911, are given as:

Fixed physical property.....	\$4,337,173
Cash and supplies	203,000
	\$4,540,173
Non-physical value	797,800
	\$5,337,973

Delaware and Atlantic Telegraph and Telephone Co.—Justice of Rates.

In the present case the inventory and appraisal of 1911 were used as a foundation, and the property accounts were brought to date of June 30th, 1916, by use of the company's book additions. The open questions relating to valuation are as follows:

1. The extent of property additions from August 31st, 1911, to June 30th, 1916, shown by the company's books.
2. The extent of accrued depreciation as the property now stands.
3. The treatment of \$315,721 loss through the purchase since 1911 of the Interstate Telephone and Telegraph Company property, which stands on the books as an intangible asset on June 30th, 1916.

The unit prices used in the 1911 appraisal were scrutinized and checked and found to be reasonable.

For the purposes of this report the value as of August 31st, 1911, is taken as above given from the report of the Board and the book figures of additions to physical plant shown by the company's ledger, are taken as agreed to by Mr. Petty, of the Board's staff, and the company. The only questions which then arise are as to the extent of accrued depreciation at June 30th, 1916 (Item 2 above), and the treatment of the intangible account (Item 3 above); beside certain minor differences between the estimates of materials and supplies and Cash Working Capital made by Mr. Petty and the company.

Testimony for the Board in the present case was by Mr. Petty, whose Exhibit C-8 gives an admitted minimum figure for present value (the accrued depreciation computation giving the outside maximum) to use as a base for learning whether the rate of return received by the company is excessive. Testimony for the company consisted of accounting figures by Mr. Trax (accountant for the company) and testimony regarding the improvement of the plant since 1911 and its present stability, by Mr. Kilpatrick (engineer for the company). The company's claim for property value as of June 30th, 1916, is given in Exhibit R-1. Exhibit R-2 gives the company's accounting balance sheet June 30th, 1916.

Delaware and Atlantic Telegraph and Telephone Co.—Justice of Rates.

EXHIBIT R-2.

THE DELAWARE AND ATLANTIC TELEGRAPH AND TELEPHONE COMPANY BALANCE
SHEET AS OF JUNE 30TH, 1916.*Assets.*

Intangible capital (201 to 204).....	\$315,720.82
Right of way (207).....	225,515.77
Land and buildings (211, 212).....	374,214.61
Central office equipment (221, 222).....	705,917.94
Station equipment (231 to 235).....	746,939.63
Exchange lines (241 to 246).....	4,258,071.91
Toll lines (251 to 256).....	1,136,584.46
General equipment (261 to 265).....	89,212.43
Total fixed capital	\$7,852,177.57
Construction work in progress (104).....	182,715.63
Miscellaneous Investments (111).....	49,066.88
Total permanent and long term investments	\$8,083,960.08
Cash and deposits (113, 114).....	55,951.21
Accounts receivable (115, 118 to 121, 123).....	116,865.83
Materials and supplies (122 less 122-10).....	118,944.12
Total working assets	\$291,761.16
Accrued income not due (124).....	538.86
Prepayments (129 to 133).....	13,203.60
Total assets	\$8,389,463.70

Liabilities.

Capital stock com. (150-01), authorized.....	\$6,000,000
Less treasury stock	1,271,500
	\$4,728,500.00
Advances from system corporations for construction, etc. (155),	2,042,900.00
Accounts payable (158 to 165).....	168,438.90
Accrued liabilities not due (166, 167).....	65,654.09
Insurance and casualty reserves (169).....	781.28
Liability for employees' benefit fund (170-01, 170-02).....	53,113.14
Other deferred credit items (170-A).....	3,629.95
Total deferred credit items	\$57,524.37
Reserve for accrued depreciation (102).....	955,894.42
Reserve for amortization of intangible capital (103).....	38,339.37
Total fixed capital reserves	\$994,233.79
Undivided profits—1916	\$24,349.60
Corporate surplus unappropriated (174, 137).....	307,862.95
Total surplus and undivided profits	\$332,212.55
Total liabilities	\$8,389,463.70

Delaware and Atlantic Telegraph and Telephone Co.—Justice of Rates.

The Exhibit R-1 sets up property claims in which (1) the 1911 appraisal is shown without depreciation (Base A), (2) the 1911 appraisal is shown with 10 per cent. of depreciable property deducted for depreciation at that date (Base B) and (3) the 1911 appraisal is shown with deduction of the 25 per cent. (\$1,419,287), stated in the report of January 7th, 1913, to be a fair estimate of the total accrued depreciation at that time (Base C).

In the following figures Base C only is used, as the report of January 7th, 1913, indicates it as the base containing the fair estimate of accrued depreciation.

(a) Company's Claim.

The company's claim, using Base C in Exhibit R-1, analyzes as follows:

Base C, August 31st, 1911, report and order.....	\$5,337,973
Deduct: cash and supplies.....	203,000
	<hr/>
	\$5,134,973
Deducting the non-physical value from this for the purposes of comparison gives the then value of the physical property on August 31st, 1911, i. e.....	797,800
	<hr/>
	\$4,337,173
The net additions to physical property from August 31st, 1911, to June 30th, 1916, are.....	\$2,450,885
The testimony gives no figures for depreciation accruing between these dates, but the company deducts the amount by which the reserve has increased between those dates, i. e.....	669,050
	<hr/>
	1,781,835
	<hr/>
Thus giving their claim for present value of physical property as..	\$6,119,008
Exhibit R-1 gives the company's claim for cash working capital as \$167,315, and for materials and supplies as \$95,753. It was pointed out at the hearing that the cash working capital required a correction to make the method used for estimating it harmonize with the corrected method used by the company in the New York Telephone case. This correction reduces the estimated figure from \$167,315 to \$136,265 as computed by Mr. Petty.	
Therefore, adding	
Company's figure for materials and supplies.....	95,753
Corrected cash working capital.....	136,265
	<hr/>
Gives	\$6,351,026
Also adding non-physical value claimed by the company as per report and order	797,800
	<hr/>
Gives the present value of the property as claimed by the company, exclusive of the intangible ledger item.....	\$7,148,826

Delaware and Atlantic Telegraph and Telephone Co.—Justice of Rates.

The only questions that arise regarding this figure of \$7,148,826 is the sufficiency of the amount of \$669,050 to represent net increase of accrued depreciation from August 31st, 1911, to June 30th, 1916, and minor differences from the foregoing company's estimates for Materials and Supplies and Cash Working Capital which Mr. Petty's figures given hereafter disclose.

(b) *Petty Exhibit C-8.*

Mr. Petty's Exhibit C-8, page 9, arrives at figures in a different way. This gives the present value of the physical property as of June 30th, 1916, as \$5,182,410, adds thereto \$126,511 for Materials and Supplies, \$8,123 for Cash Working Capital, and the \$797,800 non-physical value to which should be added \$139,534 by which Petty's figure for net additions in Exhibit C-8 should be increased, making a total of \$6,254,378 for comparison with the foregoing claim of \$7,148,826. However, this figure should be set aside as not fully pertinent to the point, as it includes a depreciation computation producing obviously too large deductions for present depreciation.

(c) *Petty's Method Modified.*

A more pertinent application of the theory used in the foregoing, Petty has worked out as follows: To the "fair estimate of replacement cost new," August 31st, 1911, less cash working capital and supplies, *i. e.*, \$5,756,460, add gross additions to physical plant from August 31st, 1911, to June 30th, 1916, which amounted to \$3,889,258 (*i. e.*, \$4,202,979, less \$315,721 intangible, Exhibit 1, sheet 2). This gives \$9,645,718 which depreciated by the table reaching 25 per cent., leaves \$6,335,987. Adding Petty's book averages for Materials and Supplies and Cash Working Capital aggregating \$134,634 and the non-physical value \$797,800, gives \$7,268,421 to compare with the company's claim of \$7,148,826.

 Delaware and Atlantic Telegraph and Telephone Co.—Justice of Rates.

(d) Review of Book Values.

Since no examination of the plant to determine its condition as of June 30th, 1916, has been made on behalf of the Board and no specific testimony on that point is available, probably the fairest comparison of the company's claim may be obtained from a review of the book values, as follows:

Plant and equipment cost, new, by ledger June 30th, 1916..	\$7,536,457
Deduct: book value of land.....	116,811
	<hr/>
	\$7,419,646

This balance of \$7,419,646 is the book value, June 30th, 1916, of the items of property corresponding in the book accounts at June 30th, 1916, to those which the Board found to be depreciated as of August 31st, 1911, by 25 per cent. Since August 31st, 1911, the amount of \$2,450,885 has been expended on extensions and betterments of the property, and \$1,438,373 cost of old property has been replaced by new (Exhibit R-1, sheet 2). These expenditures would indicate that the average condition of the property has been improved. This is also indicated by the rather steady, though small, increase since 1909, of long-lived property compared with short-lived property shown by the Petty chart, which is page 12 of Exhibit C-8. It is further supported by the testimony of Kilpatrick (engineer of the company), to the effect that the plant has increased in stability since 1911. It is, therefore, reasonable to assume that the accrued depreciation of the plant value as of June 30th, 1916, was a smaller percentage thereof than was found on August 31st, 1911—that is, the percentage of accrued depreciation on June 30th, 1916, may be reasonably assumed to be less than 25 per cent. If the betterments in the fifty-eight months, from August 31st, 1911, to June 30th, 1916, have improved the property sufficiently so that the depreciation on the latter date is 20 per cent. (which does not seem unreasonable, although the poorly maintained property of the Interstate Company was added to the ledger at value appraised as true according to Mr. Petty), then the following figures represent the present situation:

Delaware and Atlantic Telegraph and Telephone Co.—Justice of Rates.

Deducting 20 per cent. from \$7,419,646 shown above gives.....	\$5,935,717
Add value of land heretofore deducted.....	116,811
	<hr/>
	\$6,052,528
Add: Company's claim for materials and supplies.....	\$95,753
Cash working capital (corrected).....	136,265
	<hr/>
	232,018
	<hr/>
	\$6,284,546
Add: Non-physical value	797,800
	<hr/>
	\$7,082,346

This figure of \$7,082,346, obtained in this way for comparison with the company's claim of \$7,148,826 (corrected for estimated Cash Capital, as before stated), contains the company figures for Materials and Supplies and Cash Working Capital (corrected), which aggregate an amount larger than the average derived by Petty from the company's books; but the land, presumably, had in June, 1916, a higher aggregate value than the book cost of \$116,811.

Excluding the figure of method (b), the following comparative figures are obtained:

(a) Company claim (Exhibit R-1 corrected).....	\$7,148,826
(c) Modification of Petty's theory.....	7,268,421
(d) Deduction from book values and rate of old plant retirement..	7,082,346

The foregoing figures do not include the item of \$315,721 entered on the books as an intangible asset through the purchase of the Interstate Company. This entry is in account 204 and appears to represent the difference between (1) the amount paid by the Delaware and Atlantic Telegraph and Telephone Company for the property of the Interstate Company and (2) the lesser appraised value of the property obtained by the purchase and maintained in service. The testimony of Mr. Trax shows that account 204 contains figures relating to this Interstate Company transaction only.

The company has adopted with respect to this property a plan, which appears to be sound, of gradually writing it off out of Surplus. The Annual Report to the Board for 1916 shows a start in that direction. (See page 313 of Annual Report.)

2. REVENUES AND EXPENSES.

The revenues and expenses of the company have been checked by Petty for the years 1909 to 1916, inclusive. The results are shown in the following table, which is part of Exhibit C-8.

Delaware and Atlantic Telegraph and Telephone Co.—Justice of Rates.

COMPANY: Delaware and Atlantic Telegraph and Telephone Co.		DIVISION: New Jersey.					File No. 456.	
COMPUTER: J. P. Petty.		DATE: 6-8-17.					Acc. No. 1.	
SUBJECT: (A) Condensed Statement of Operating Revenue, Expenses and Deductions.							Sheet No. 124.	
(B) Ratio of New Earnings from Operating to Average Capital (Book) Less Reserves.								
	1900.	1910.	1911.	1912.	1913.	1914.	1915.	1916.
					Annual Rep.	Annual Rep.	Annual Rep.	Annual Rep.
Revenues.								
Exchange revenues	\$499,498	\$537,647	\$571,978	\$729,022	\$781,560	\$835,487	\$912,541	\$1,080,780
Toll revenues	899,413	469,436	460,439	493,319	480,333	493,484	535,796	597,323
Miscellaneous operating revenues	433	61	1,352	8,750	6,644	7,002	9,306	14,326
Interest on bank balances	332	285	421	339	153	405	822	1,092
Revenues from operation—(1)	\$869,678	\$977,358	\$1,124,190	\$1,207,439	\$1,268,500	\$1,336,448	\$1,458,465	\$1,679,531
Expenses and Deductions.								
Operating expense	\$352,876	\$384,535	\$428,306	\$457,572	\$503,538	\$523,624	\$574,016	\$701,440
Maintenance and station changes	168,925	169,759	199,985	207,208	197,959	185,066	237,053	252,009
Depreciation and amortization—(1)	104,280	213,193	272,000	302,720	328,183	344,682	376,802	431,429
Taxes	52,290	49,095	53,703	58,002	57,785	60,296	83,993	152,447
Total expenses and deductions—(2)	\$678,371	\$816,582	\$953,994	\$1,025,502	\$1,087,465	\$1,122,608	\$1,272,367	\$1,537,925
Net revenue from operation—(3)	\$191,307	\$160,756	\$170,196	\$181,937	\$181,125	\$213,750	\$186,108	\$141,606
Average book capital	\$4,468,789	\$4,815,142	\$5,165,436	\$5,490,163	\$5,337,532	\$6,330,715	\$7,045,375	\$7,830,759
Less reserves average	34,139	138,741	308,232	506,011	685,020	799,732	869,613	1,004,171
Average book capital less average reserve balances—(4)	\$4,434,650	\$4,676,401	\$4,857,204	\$4,971,152	\$4,652,512	\$5,530,983	\$6,175,762	\$6,826,588
Net revenue in percentage of average net book capital	4.09%	3.44%	3.50%	3.66%	3.81%	3.86%	3.02%	2.07%
Deficits on basis of 8% interest (not compounded) of net book capital								
Items not included in above—bonus paid employees	\$173,466	\$213,516	\$218,380	\$215,755	\$231,076	\$228,729	\$307,893	\$404,521
								(2) 30,531

(1) Does not include other items charged through clearing accounts and supply adjustment.

(2) This is 0.44% of base.

(3) This includes accounts 207 to 265, 122 and 104; the latter is included in lieu of working cash.

Delaware and Atlantic Telegraph and Telephone Co.—Justice of Rates.

This table shows net revenue from operation of \$141,606 for the year 1916. The greatest annual net revenue from operation during the period covered is \$213,750 for the year 1914.

The company produced Exhibit R-3, part of which follows, covering 1914, 1915 and 1916:

EXHIBIT R-3.

INCOME STATEMENT.

(Net Earnings from Operation.)

The Delaware and Atlantic Telegraph and Telephone Co.

	1914.	1915.	1916.
Operating revenues—			
Telephone operating revenues (300)...	\$1,278,729	\$1,396,385	\$1,607,343
Other operating revenues (302).....	.....	.....	.....
Total operating revenues	\$1,278,729	\$1,396,385	\$1,607,343
Miscellaneous rent revenues (311).....	684	635	688
Total operating and rent revenues..	\$1,279,413	\$1,397,020	\$1,608,031
Operating expenses—			
Telephone operating expenses (301)...	\$947,228	\$1,076,795	\$1,260,264
Other operating expenses (303).....	.....	.....	.....
Total operating expenses	\$947,228	\$1,076,795	\$1,260,264
Deductions—			
Uncollectible operating revenue (304),	\$14,982	\$17,681	\$20,500
Taxes assignable to operation (305)..	69,296	83,996	152,447
Rent expenses (320) .....	.....	.....	1,066
Rent deductions for lease of telephone plant (330) .....	.....	.....	.....
Rent deduction for telephone offices (331)	16,840	14,669	13,165
Rent deduction for conduits, poles and other supports (332)	5,111	6,266	6,485
Rent deduction for instruments and equipment (333) .....	.....	1,073	1,402
Miscellaneous rent deductions (334)..	4,823	2,118	1,748
Amortization of landed capital (340)..	7,164	8,412	10,819
Miscellaneous deductions from income (341) .....	.....	.....	.....
Total deductions	\$1,118,216	\$134,215	\$207,632
Total expenses and deductions....	1,065,444	1,211,010	1,467,896
Balance—net earnings from operations,	\$213,969	\$186,010	\$140,135

New York Telephone Co.—Reasonableness of Rates.

This table shows net revenue from operation of \$140,135 for the year 1916. This figure does not include \$1,092 interest on bank balances, which Petty included, but which Trax omitted. There are some slight differences between the Petty and Trax figures of expenditures, but they are in substantial accord. We adopt Petty's figure of \$141,606 as representing net revenues for 1916.

Without making any addition to the value of physical property for non-physical values, we find that the physical property alone is valued at more than six million dollars. Applying to this figure the net revenue as above ascertained of \$141,606, the percentage of return upon fair value of physical property only is less than 3 per cent.

Rates which produce a return so limited cannot be held to produce excessive returns and to be unjust and unreasonable. No order disturbing the existing rates will, therefore, be entered.

Dated November 20th, 1917.

No. 487.

IN THE MATTER OF THE INQUIRY AS TO THE JUSTICE AND REASONABleness OF THE RATES OF THE NEW YORK TELEPHONE COMPANY.

1. In an investigation to determine the reasonableness of the rates charged by the New York Telephone Company a complete inventory was made of the physical property of the company in New Jersey.

2. A conclusion formed as to the cost to reproduce new the physical property was based upon unit prices prevailing just prior to the war for property in existence up to the first of the year 1915, the use of the higher prices of 1915 for that year and the use of the still higher prices for 1916 for property added during 1915 and 1916 up to June 30th of 1916.

3. In determining the base on which a return should be allowed from the fair value of the company's property new 13.4 per cent. is deducted for accrued depreciation. Additions are made for working capital including materials and supplies for preliminary organization and development and commercial cost of securing stations.

4. Eight per cent. is held to be a proper allowance to afford a fair return on the reasonable value of the property.

New York Telephone Co.—Reasonableness of Rates.

L. Edward Herrmann and Frank H. Sommer, for the Board.

Robert V. Marye and John L. Swayze, for the New York Telephone Company.

On March 28th, 1916, the Board issued an order, on its own initiative, for an inquiry as to whether the rates of the New York Telephone Company produced more than a reasonable return on the fair value of the company's property in 1916.

The proceeding, therefore, turns upon two questions, namely:

1. What is the fair value of the property, and
2. What were the net receipts, in 1916, under fair interpretations of the meaning of the phrase, including proper deductions from revenue, needful appropriations to reserves, and the like, and ordinary operating expenses, taxes and like disbursements?

The record made may be considered under the following heads:

1. The cost of the physical property new, and the additions thereto which should be allowed for intangible values, if any.
2. The extent of the depreciation of the existing physical plant.
3. The gross revenue and the net revenue for 1916.
4. The reasonable requirements in the way of annual appropriations for depreciation.
5. The base on which a fair return is allowable, which is obtained from the combination of items 1 and 2.
6. The rate of return to be allowed.
7. The surplus or excess earning over and above all reasonable disbursements and a fair return, in 1916, which is derived from items 3, 5 and 6.

The Board caused the testimony of Philander Betts, the Chief Inspector of its Utilities Division, John P. Petty, Harry E. Carver, George G. Mankey and Albert L. Pashek, of its staff, and of William C. Boyrer and Dugald C. Jackson, experts specially engaged by the Board, to be introduced.

The company produced as witnesses George W. Whittemore, its engineer, Harlan A. Trax, its accountant, and Sergius P. Grace, its traffic engineer.

A complete inventory of the physical property of the company was made, and, after checking, there was substantial agreement

New York Telephone Co.—Reasonableness of Rates.

between the engineers of the Board and of the company as to the existence of the property included therein.

The appraisal of the property was confined to that used and useful in rendering service in the State of New Jersey.

1. REPRODUCTION COST NEW OF PHYSICAL PROPERTY,
JUNE 30TH, 1916.

The reproduction cost new of the physical property of the company on June 30th, 1916, as claimed by it, is set forth in detail in the company's Exhibits R-1, R-2 and R-15, and amounts to \$33,328,621, the pertinent summaries of which follow:

TABLE A.

(Exhibit R-1, pp. 4 and 5.)

INVENTORY AND APPRAISAL—SUMMARY OF TOTAL CONSTRUCTION COSTS INCLUDING OVERHEAD CONSTRUCTION COSTS AS CONTAINED IN APPRAISAL
AS OF DECEMBER 31ST, 1915.

Acc. No.			
207-01	Exchange right of way.....	\$742,237	
207-02	Toll right of way.....	434,590	
	Total right of way.....		\$1,176,827
211	Land	\$695,154	
212	Buildings	2,434,239	
	Total land and buildings.....		3,129,393
221	Central office telephone equipment.....	\$3,872,185	
222	Other equipment of central office.....	150,450	
	Total central office equipment.....		4,022,635
231	Station apparatus	\$1,610,332	
232	Station installations	615,161	
233	Interior block wires.....	146,815	
234	Private branch exchanges	565,694	
235	Booths and special fittings.....	205,116	
	Total station equipment		3,143,118

New York Telephone Co.—Reasonableness of Rates.

241	Exchange pole lines	\$2,392,873	
242	Exchange aerial cable	2,543,948	
243	Exchange aerial wire	1,383,621	
244-14	Exchange U. G. conduit—Main	3,859,394	
244-24	Exchange U. G. conduit—subsidiary	853,338	
245-15	Exchange U. G. cable—main	3,111,471	
245-25	Exchange U. G. cable—subsidiary	1,334,970	
246	Exchange submarine cable	23,789	
Total exchange lines			15,503,404
251	Toll pole lines	\$1,689,609	
252	Toll aerial cable	374,563	
253	Toll aerial wire	1,195,539	
254	Toll underground conduit	673,216	
255	Toll underground cable	1,972,715	
256	Toll submarine cable	107,570	
Total toll lines			6,013,212
261	Office furniture and fixtures	\$167,637	
262	General shop equipment		
263	General store equipment	17,437	
264	General stable and garage equipment	105,735	
265	General tools and implements	74,272	
Total general equipment			\$65,081
Grand total, State of New Jersey		\$33,353,670	\$33,353,670

<i>Errata R-1.</i>		<i>Add.</i>	<i>Deduct.</i>	
Land		\$3,732	.....
Buildings		9,344	.....
Central office equipment		20	.....
Exchange U. G. cable—main .....		.....	\$9,005	
Toll U. G. cable		6,536	.....
		\$19,632	\$9,005	
Net deductions				10,627
Total corrected construction costs of plant and general equip- ment				\$33,328,621

New York Telephone Co.—Reasonableness of Rates.

TABLE B.

NEW YORK TELEPHONE COMPANY, NEW JERSEY PROPERTY, APPRAISAL AS OF JUNE 30TH, 1916. SUMMARY—ALL PROPERTY, EXHIBIT E-13* REVISED.

A—Plant and General Equipment, Ex. R-1.	
(a1) As in Exhibit No. 13**.....	\$33,343,043
(a2) Less on account stations in Staten Is., Note No. 1:	
Cortlandt-Dey site	\$3,842
Cortlandt-Dey building	7,919
Fur. & Fix. building.....	1,059
Add—construction overheads, at 12.5....	1,602
	<u>14,422</u>
(a3) Balance, corrected total—plant and general equip- ment	\$33,328,621
B—Working Capital, Ex. R-11.	
(b1) Materials and supplies, as in Ex. R-11.....	158,223
(b2) Working cash (b2), as in Ex. R-11....	\$1,028,856
(b3) Less on account of use of ratio of cur- rent operating expenses and taxes to subscribers' accounts receivable of 49.24 instead of ratio of 75 per cent. including expense of depreciation (see note No. 2).....	111,953
	<u>916,903</u>
(b4) Corrected total, working capital.....	\$1,075,126
C—Preliminary Organization and Development.	
At 2½ per cent. of (a3 plus b1).....	837,171
D—Commercial Costs of Securing Stations, Ex. R-12.	
167,346 stations, in New Jersey, instead of 175,943 sta- tions as used in Ex. R-12, which latter included stations in Staten Island (see note No. 3), at 4.29.....	717,914
	<u>\$35,958,832</u>
Grand total—items A plus B plus C plus D, as revised,	

NOTE.—Items C plus D equal, as per cent. of items A plus B, 4.52 per cent.

*And as shown also in preceding extracts from Ex. R-1.

**Same as on Ex. R-1, p. 5.

This claim of the company is analyzed and criticised in the testimony of D. C. Jackson (whose analysis was based in part upon the testimony of the witnesses Betts and Boyrer). The results of such analysis are set forth in Exhibit C-24, which follows:

New York Telephone Co.—Reasonableness of Rates.

TABLE C.

APPRAISAL OF PROPERTY OF NEW YORK TELEPHONE COMPANY—COMPARISON OF COMMISSION'S APPRAISAL WITH BOOK COSTS, ALL AS OF JUNE 30TH, 1916.

Acct. No.	TITLE.	N. J. Commission.		New York Telephone Co.	
		Estimated Cost to Reproduce New, Including Piecemeal Allowance.	† Book Cost as per Ledger.	Book Cost as per Ledger Plus 6% Allowance for Interest during Construction.	Book Cost as per Ledger Plus 6% Allowance for Interest and 1½% for Taxes during Construction.
207-01	Exchange right-of-way	\$743,678	\$413,086	\$437,871	\$444,067
207-02	Toll right-of-way	436,810	181,397	192,281	195,002
211	Land	a 624,638	a 402,490	a 426,639	a 432,676
211	Land (final figure)	(852,763)			
212	Buildings	a 2,366,973	a 1,930,089	a 2,046,848	a 2,075,813
221	Central office telephone equipment,	3,967,263	c 3,394,861	c 3,598,553	c 3,649,476
222	Other central office equipment,	150,370	84,540	100,212	101,630
231	Station apparatus	1,617,482	1,396,180	1,479,951	1,500,894
232	Station installations	619,290	674,696	715,178	725,299
233	Interior block wires	• 158,732	194,528	206,200	209,117
234	Private branch exchanges	560,472	532,743	564,708	572,699
235	Booths and special fittings	• 206,725	175,900	186,454	189,093
241	Exchange pole lines	• 1,855,157	1,913,763	2,028,589	2,067,296
241	Exchange pole lines (final figure),	(1,938,195)			
242	Exchange aerial cable	• 2,526,103	2,501,932	2,632,048	2,689,577
243	Exchange aerial wire	• 1,374,419	1,489,226	1,578,590	1,600,918
244	Exchange underground conduit,	• 4,487,765	3,186,640	3,877,838	3,425,637
245	Exchange underground cable	• 4,165,587	4,011,315	4,251,994	4,312,164
246	Exchange submarine cable	• 29,673	38,807	41,135	41,717
251	Toll pole lines	• 1,209,348	1,161,262	1,230,938	1,248,357
251	Toll pole lines (final figure)	(1,245,908)			
252	Toll aerial cable	• 391,970	387,335	410,575	416,385
253	Toll aerial wire	• 1,366,221	993,458	1,063,065	1,067,967
254	Toll underground conduit	• 579,970	483,312	512,311	519,561
255	Toll underground cable	• 2,027,213	1,672,959	1,773,337	1,798,432
256	Toll submarine cable	• 141,154	d 100,940	d 106,996	d 108,910
261	Office furniture and fixtures	a b 122,424	a 122,424	a 129,769	a 131,605
262	General shop equipment	b 15,499	15,499	16,429	16,661
263	General store equipment				
264	General stable and garage equip- ment	a b 94,957	a 94,957	a 100,654	a 102,079
265	General tools and implements	b 66,791	66,791	70,798	71,800
	Total	\$31,815,194	\$27,682,030	\$29,289,951	\$29,704,432
	Total (final figure)	(\$31,962,917)			

* Cost estimated by D. C. & Wm. B. Jackson, including allowance for piecemeal construction of approximately \$1,870,000 distributed over these items.

† As per testimony of Mr. Petty, March 27th, 1917.

a Includes Commission's estimated cost of property outside New Jersey but useful to carry on business in New Jersey.

b Book value.

c Includes Commission's estimate of value of semi-automatic equipment, not yet carried on company's ledgers but included in appraisal.

d Includes Commission's estimate of value of Hudson river cables, not carried on company's New Jersey ledgers but included in appraisal.

New York Telephone Co.—Reasonableness of Rates.

The conclusion reached by this witness is that the reproduction cost new of physical property, June 30th, 1916, was \$31,815,194. This figure of \$31,815,194 was subsequently corrected by an addition of \$119,598 for tree-trimming, and \$28,125 for land values, making a revised total of \$31,962,917.

The Exhibit C-15, prepared by the witness Petty, sets forth the cost new in accordance with accounts in the company's ledgers. The ledger cost of construction, as shown by this exhibit, is \$27,632,030.

New York Telephone Co.—Reasonableness of Rates.

TABLE D.

NEW YORK TELEPHONE COMPANY—ADJUSTED BOOK VALUES AS OF JUNE 30TH, 1916. (Ex. C-15.)

Acc. No.		Ledger Balances.	Add or Deduct.	Adjusted Balance.	Construction in Progress by Accounts.
207-01	Exchange right-of-way	\$413,086 26		\$413,086 26	
207-02	Toll right-of-way	181,307 29		181,307 29	
	Total right-of-way	\$594,483 55		\$594,483 55	
211	Land	\$316,206 00	\$86,283 91	\$402,489 91	
212	Building	1,769,679 89	161,309 12	1,930,989 01	\$23,852 09
	Total land and buildings...	\$2,085,885 89	\$247,593 03	\$2,333,478 92	\$23,852 09
221	Central office telephone equipment	\$2,955,072 14	\$438,789 00	\$3,394,861 14	\$35,133 79
222	Other equipment of central office	94,539 47		94,539 47	493 49
	Total central office equipment	\$3,050,611 61	\$438,789 00	\$3,489,400 61	\$35,627 28
231	Station apparatus.....	\$1,396,180 56		\$1,396,180 56	
232	Station installations.....	674,695 77		674,695 77	
233	Interior block wires.....	194,528 28		194,528 28	
234	Private branch exchanges.....	532,742 76		532,742 76	
235	Booths and special fittings.....	175,899 88		175,899 88	
	Total station equipment....	\$2,974,047 25		\$2,974,047 25	
241-01	Exchange pole lines	\$1,913,763 04		\$1,913,763 04	\$27 21
242	Exchange aerial cable	2,501,932 31		2,501,932 31	2,488 25
243	Exchange aerial wire	1,489,225 65		1,489,225 65	
244-14	Exchange U.G. conduit—main,	2,637,378 58		2,637,378 58	994 08
244-24	Exchange U.G. conduit—sub-				
	sidiary	549,261 84		549,261 84	1,713 54
245-15	Exchange U.G. cable—main.....	2,778,241 03		2,778,241 03	2 00
245-25	Exchange U.G. cable—sub-				
	sidiary	1,233,073 78		1,233,073 78	
246	Exchange submarine cable.....	38,807 21		38,807 21	
	Total exchange lines.....	\$13,141,683 44		\$13,141,683 44	\$5,195 08
251	Toll pole lines	\$1,161,262 13		\$1,161,262 13	\$1,316 82
252	Toll aerial cable	387,334 68		387,334 68	7 38
253	Toll aerial wire	993,458 55		993,458 55	13 53
254	Toll U.G. conduit	483,311 50		483,311 50	70,611 84
255	Toll U.G. cable	1,672,959 32		1,672,959 32	76,690 16
256	Toll submarine cable	83,255 15	\$17,685 00	100,940 15	3 72
	Total pole lines.....	\$4,781,581 42	\$17,685 00	\$4,799,266 42	\$148,613 45
207-01 to 256	Plant in service.....	\$26,628,293 18	\$704,067 03	\$27,332,360 19	\$213,287 90
261	Office furniture and fixtures..	\$106,073 07	\$16,350 85	\$122,423 92	
262	General shop equipment				
263	General store equipment	15,499 41		15,499 41	
264	General stable and garage equipment	86,689 54	8,267 00	94,956 54	
265	General tools and implements,	66,790 78		66,790 78	
	Total general equipment....	\$275,062 80	\$24,617 85	\$299,670 65	\$213,287 90
207-01 to 265	Plant and equipment in service,	\$26,903,345 96	\$728,684 88	\$27,632,030 84	
122	Materials and supplies.....	154,974 01		154,974 01	
	Total	\$27,058,319 97	\$728,684 88	\$27,787,004 85	\$213,287 90
104	Construction in progress.....	213,287 90		213,287 90	
204	Other intangible capital.....	253,984 65		253,984 65	
	Total property (book).....	\$27,525,592 52	\$728,684 88	\$28,254,277 40	

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The company's estimate of the cost of reproduction new as of June 30th, 1916, corrected, is given in Exhibit R-15, submitted by the witness Whittemore. This estimate includes non-physical costs. In this the plant and general equipment comes to \$33,328,621, working capital, including materials and supplies, to \$1,075,126, preliminary organization and development to \$837,171, commercial costs of securing stations to \$717,914, making a total of \$35,958,832.

The Jackson estimated cost of reproduction new includes only the physical property and does not include working capital and the intangible items named in Whittemore's Exhibit R-15. The aggregate of the Jackson figures given in the first column, in Exhibit R-24, corrected, as before stated, is \$31,962,917. Deducting therefrom the allowance which is therein included for taxes during construction on the items appraised by Jackson, *i. e.*, 1.5 per cent., which it appears that the company has not paid by reason of the methods of construction adopted, the item is \$31,662,719 (see Item 2, Ex. C-22, corrected). This figure is comparable with the Whittemore figure of \$33,328,621. Exhibit C-22 follows: •

TABLE E.

(Exhibit C-22.)

APPRAISAL OF PROPERTY OF NEW YORK TELEPHONE COMPANY, AS OF JUNE 30TH, 1916. SUMMARY.

Cost to Reproduce New.

1. Commission appraisal	*\$31,815,194
2. Commission appraisal less allowance of 1½ per cent. for taxes during construction on items appraised by Jackson.....	31,514,996
3. Book cost as per company's ledger.....	27,632,030
4. Book cost plus allowance of 6 per cent. on total for interest during construction	29,289,951
5. Estimated amount to bring book cost of conduit labor to normal 1914 figures instead of average experienced for over 20 years.....	\$1,000,000
Estimated amount to bring book cost of buildings to normal 1914 conditions (distributed costs only)	164,134
Amount which appraisal of present value of land exceeds book cost (distributed costs only)...	152,744
Amount which appraisal of present value of rights of way exceeds book cost (distributed costs only)	454,395
	<hr/>
	1,771,273
6. Number 3 plus number 5.....	29,403,303
7. Number 4 plus number 5.....	31,061,224

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Present Value.

8. Using Jackson life and salvage tables, percentage physical condition compared with new is for total physical plant on December 31st, 1915 (it is also same for June 30th, 1916),	78.5%**
9. Using company estimate of physical condition the percentage as of December 31st, 1915, is approximately (this includes no allowance for obsolescence).....	90.0%
10. Taking \$31,515,000 for cost to reproduce new, 78.5% is.....	24,739,275
11. Taking \$31,515,000 for cost to reproduce new, 90.0% is.....	28,363,500

*Subsequently corrected to \$31,062,917 (see C-24).

**Ledger accounts according to Mr. Petty's testimony of March 27th, 1917, after testimony of Mr. Jackson which related to the uncorrected ledger accounts.

Comparisons of the Jackson and Whittemore estimates were made both by Whittemore and Jackson.

Analysis shows that the differences in the estimates of the cost to reproduce new are almost wholly in the estimates of cost of pole lines and conduits, the former having a difference of substantially \$1,000,000, and the latter having a difference of over \$300,000.

Corresponding ledger values of the company's construction are given in Mr. Petty's testimony of March 27th, 1917, and made Exhibit C-15. The figure is also given in the second column of figures of C-24, being \$27,632,030, as before noted.

On examination of the company's accounting, it appears that very little, if any, interest during construction has been put on the books during the construction of the plant. An even 6 per cent. for one year has been allowed in the Jackson appraisal on the hypothesis of the construction of the plant as a whole. Adding this 6 per cent. to the \$27,632,030 brings the item to \$29,289,951. The book costs for buildings are also lower than the "present cost," prior to the war by \$164,134, and the appraised value of the land and rights of way are higher than the book values, respectively, by \$152,744 and \$454,395, as shown in Item 5 of Exhibit C-22. The conduit labor is estimated to have been higher than the book figures by about \$1,000,000, as also shown in Item 5 of Exhibit C-22. Adding the total of Item 5 of Exhibit C-22 to the book cost in the company's ledger of \$27,632,030, plus 6 per cent. for interest during construction, gives Item 7 of C-22 \$31,061,224, which compares very closely with Item 2 of C-22, namely, the Jackson

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appraisal, less the allowance for taxes during construction, which is \$31,662,609, corrected as above.

Upon the whole record in this case it may be reasonably concluded that the cost to reproduce new the physical property as of June 30th, 1916, lies between \$31,000,000 and \$32,000,000. This conclusion is based upon the use of the unit prices prevailing just prior to the war for the property in existence up to the first of the year 1915, the use of the higher prices of 1915 for the twelve months of that year, and the use of the still higher prices of 1916 for the first six months of that year, for the addition of property during these two years up to June 30th, 1916.

Mr. Whittemore's estimate of the physical property, therefore, may be set down as approximately one and two-thirds million dollars, or, approximately, 5 per cent. too high. Taking the Jackson appraisal, less the allowance for taxes, as the base for the reproduction of the physical property new, this gives in round numbers \$31,665,000. No allowance for financing and similar expenses is included in the foregoing figure, because it appears that all financing is taken care of by the American Telephone and Telegraph Company under its contract with the New York Telephone Company.

2. EXTENT OF DEPRECIATION OF EXISTING PLANT.

Depreciation of existing plant was the subject of considerable testimony. In addition to the other testimony, there was submitted Exhibit C-39, which gave the results of Mr. Petty's examination of the company's books to determine the cost of current repairs, realized depreciation and the amount of depreciated reserves.

The company's claims are shown in Exhibit R-16, in detail, recapitulated in R-10 A & B, submitted by Mr. Whittemore (A being first sheet and B being second sheet).

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RECAPITULATION OF COMPANY'S CLAIM TO SHOW, SEPARATELY, AMOUNTS FOR
EXISTING DETERIORATION AND FOR INADEQUACY CONTAINED IN
TOTALS FOR BOTH ITEMS.

Account No.	Portion of Plant.	Total Deductions to Reach Structural Value.	
		Physical Deterioration.	Inadequacy, etc.
211	Land .....	.....	.....
212	Buildings	\$68,179	\$49,032
221	C. O. Tel. equipment.....	118,051	299,135
222	Other equipment of C. O.'s.....	29,221	.....
231	Station apparatus	117,175	.....
233	Interior block wires	28,966	.....
234	Private branch exchanges	40,162	.....
235	Booths and special fittings.....	24,622	.....
241	Exchange pole lines	934,414	.....
242	Exchange aerial cable	190,861	237,353
243	Exchange aerial wire	229,000	.....
244	Exchange U. G. conduit—main.....	.....	.....
254	Toll U. G. conduit—main.....	22,000	65,900
244-24	Exchange U. G. conduit—sub.....	50,405	.....
245	Exchange U. G. cable.....	169,168	219,917
246-56	Submarine cable	15,353	.....
251	Toll pole lines	745,193	.....
252	Toll aerial cable	52,024	34,560
253	Toll aerial wire	39,744	50,938
254	Toll underground cable	56,429	75,240
260	General equipment	92,319	.....
		\$3,023,286	\$1,032,076

Summary.

(a)	Estimated reproduction cost new of above items except "land"	\$30,179,203
(b)	Physical deterioration, in above items, as above— Amount	3,023,286
	Per cent. of (a).....	10.0%
(c)	Manifested inadequacy, etc., in above— Amount	1,032,075
	Per cent. of (a).....	3.4%
(d)	Total—physical deterioration, manifested inadequacy, etc.— Amount	4,056,361
	Per cent. of (a).....	13.4%

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Dr. Jackson dealt with depreciation in three ways. One method was by taking Whittemore's figures as set forth in Exhibit R-16. The results reached by this treatment are shown in the last column of Exhibit C-25, and approximate 10 per cent. of the value of land and property, excluding land and rights of way.

Jackson's second method was by applying life tables and straight line depreciation computation. By this method Jackson calculated (as shown in the second column of Exhibit C-25) the maximum physical depreciation, including obsolescence and inadequacy, to be 21.5 per cent.

The third method was by using the life tables included in the annual reports of the company to the Board, and upon the basis of which it sets up its depreciation reserves. The results of applying these tables are shown in Exhibit C-20, and indicate more than 29 per cent., theoretical depreciation of the property, excluding lands and rights of way.

The results of the application of these methods are shown in the following table:

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TABLE F.

(Exhibit C-25, supplemented by C-20.)

 APPRAISAL OF PROPERTY OF NEW YORK TELEPHONE COMPANY—COMPARISON OF
 THEORETICAL STRAIGHT LINE DEPRECIATION AND PHYSICAL DEPRE-
 CIATION, ALL AS OF DECEMBER 31ST, 1915.

Acc. No.	TITLE.	Cost to Reproduce New, Including Piecemeal Allowance.	Total Theoretical Straight Line Depreciation.	† Total Physical Depreciation.	Total Theoretical Depreciation, Company's Table by Exhibit C-20.
207-01	Exchange right-of-way	\$725,325			
207-02	Toll right-of-way	431,932			
211	Land	a 624,638			
211	Land (final figure).....	(652,763)			
212	Buildings	a 2,366,844	\$501,674	\$72,442	\$509,234
221	Central office telephone equipment,	3,724,833	993,288	119,195	1,554,242
222	Other central office equipment....	146,104	38,980	29,221	67,667
231	Station apparatus	1,553,048	298,080	116,479	339,673
232	Station installations	582,131	110,604		
233	Interior block wires.....	* 151,269	64,300	30,258	50,001
234	Private branch exchanges.....	535,479	152,610	40,161	176,536
235	Booths and special fittings.....	192,287	45,655	24,006	49,614
241	Exchange pole lines	* 1,806,216	903,110	722,486	1,057,440
242	Exchange aerial cable	* 2,406,440	433,161	187,702	852,560
243	Exchange aerial wire	* 1,298,446	103,876	228,526	527,777
244	Exchange underground conduit....	* 4,407,783	793,404	119,010	1,263,550
245	Exchange underground cable.....	* 3,911,398	704,052	156,458	1,032,282
246	Exchange submarine cable.....	* 28,843	5,190	3,461	20,092
251	Toll pole lines	* 1,180,890	590,448	531,400	672,518
252	Toll aerial cable	* 392,387	109,865	54,934	160,237
253	Toll aerial wire	* 1,295,388	207,264	45,339	821,062
254	Toll underground conduit	* 546,428	103,816	10,925	110,194
255	Toll underground cable	* 1,969,231	413,539	59,077	440,919
256	Toll submarine cable	134,051	28,154	16,056	120,263
261	Office furniture and fixtures.....	a b 117,091		23,418	
262	General shop equipment				
263	General store equipment	b 15,734		3,147	
264	General stable and garage equip- ment	a b 91,283		27,385	
265	General tools and implements....	b 59,850		23,040	
	Total	\$30,665,319	\$6,598,050 † or 21.5%	\$2,645,654 or 8.63%	\$9,330,811 or 29.35%
	Total excluding land and right-of-way	28,883,424	6,598,050 or 22.84%	2,645,654 or 9.16%	

* Cost estimated by D. C. & Wm. B. Jackson, including allowance for piecemeal construction of approximately \$1,800,000 distributed over these items.

† Percentages for "physical depreciation" (which are exclusive of allowance for obsolescence and inadequacy) are taken from the results of an investigation by the New York Telephone Company as set forth in their exhibit entitled "Structural Value."

‡ 21.5 per cent. deduction gives 73.5 per cent. for present physical condition by theoretical depreciation (straight line depreciation).

 a Includes Commission's estimated cost of property outside New Jersey but useful to carry-
 ing on business in New Jersey.

b Book value.

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Mr. Whittemore's testimony as to depreciation of the plant was detailed. He concluded that, excluding lands and rights of way, the actual accrued depreciation for physical and other reasons was 13.4 per cent.

Jackson's testimony indicates that his figure of 21.5 per cent. is the maximum and his figure of 10 per cent. is the minimum, and that the proper figure, representing actual depreciation, is somewhere between these two figures and probably nearer the 10 per cent. He also pointed out that the 29 and a fraction per cent. shown in Exhibit C-20, is obviously excessive.

Taking all of the testimony on this point into consideration it may reasonably be concluded that the depreciation of the existing physical plant, excluding land and rights of way, is, approximately, 13.4 per cent., or 12.56 per cent. on all the physical property.

The Petty Exhibit C-39 is more particularly pertinent in the consideration of the annual appropriations for depreciation, and will be dealt with under that head.

3. GROSS AND NET REVENUE FOR 1916.

The company introduced Exhibit R-14, showing the gross revenue and the net revenue for a period of years, beginning with 1911 and ending with 1916, as it stands upon the books. This shows for 1916 a balance of net earnings from operations of \$2,931,142. It was claimed by Mr. Petty and Dr. Jackson that certain offsets, due to items not provided for under the company's system of accounting for the New Jersey division, and others which should be taken into account because of consideration of the value of plant from appraisal instead of from book valuation, were not included.

The company later introduced an adjusted exhibit, R-17, to take into account their interpretation of items corresponding to such adjustment. By this exhibit the net earnings from operations, in 1916, are increased to \$3,040,352. This exhibit will be discussed in connection with Exhibit C-39.

Exhibit C-39 sets forth the expenditure of the company for current repairs and for replacements and depreciation, *i. e.*, accrued

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depreciation year by year, from 1884 to 1916, inclusive. It also exhibits the results in charts, the second of these charts being of most importance in this connection. Petty's study shows that expenditure for current repairs, and for renewals and replacements which are required to counteract the accrued depreciation, have conjointly been of a descending proportion of the total property, as the total property has become more stable. During the years 1892 to 1906 the sum of expenditures on plant for current repairs and renewals and replacements averaged, approximately 12.5 per cent. of the ledger value of plant. (Ex. C-39, p. 7.) During this period the relation of plant was changing rapidly, the aerial lines reducing rapidly in proportion to the whole and the underground lines increasing rapidly. At the end of this period the plant became of a substantially stable ratio as between the long life property and the short life property. For several years the combined cost of current repair and renewals and replacements fell off in proportion to the aggregate of plant and then became substantially stable, with annual variations, such as one would expect, due to the different conditions in different years. Since 1909, the sum of current repairs and renewals and replacements has averaged, substantially, 7.5 per cent. It rose somewhat above that figure in 1910, and materially above that figure in 1914, the latter being a year of particularly severe storms which required an unusual amount of reconstruction. In the other years since 1909 it has been always below 7.5 per cent. This is clearly shown by the red line on the chart, which is page 7 of Exhibit C-39, the vertical scale of this red line being read in percentages of the total capital shown on the company's ledger at the middle of each year and the expenditure itself being the actual amount for the calendar year taken from the books.

Petty has divided his analysis of the plant conditions into (a) the period from 1884 to 1896, inclusive (Ex. C-39, p. 4), (b) the period from 1897 to 1906, inclusive (Ex. C-39, p. 4), and (c) the period from 1907 to 1916, inclusive (Ex. C-39, p. 5).

He shows that the average expenditures for the first period amounted to 14.05 per cent. The average expenditures for the second period amounted to 12.14 per cent. and for the third period 7.53 per cent. The chart also shows that it is a little lower than

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7.53 per cent. if the last period is taken for less than ten years. From this analysis he reaches the conclusion that in the year 1916 the company appropriated for its depreciation \$394,544 more than was requisite to meet all requirements of realized and accrued depreciation for the property.

Jackson's testimony shows that in his opinion the reserve for depreciation for 1916 was at least \$110,387 more than was necessary for that year (p. 1258).

Returning now to the Exhibit R-17, which is the company's income statement adjusted by them "in accordance with the basis used in appraising plant and working capital," it will be observed that the interest on bank balances is given as \$14,737, as against Petty's figures (Ex. C-39, p. 10) of \$15,180. The company includes \$98,696, interest during construction, which should be set over on account of including interest during construction as a capital account, making the gross revenue for the year \$9,063,386, including the set over of interest during construction. This corresponds with the operating revenue of \$8,949,953, shown in Exhibit R-14, plus the interest earned on bank balances and the set over for interest during construction. There has already been deducted the 4.5 per cent. paid to the American Telephone and Telegraph Company (see License Revenue, Dr. Page 1, Ex. R-14), so that the item of \$9,063,386 for operating revenues given by the company is the operating revenue, after the deduction of the 4.5 per cent. to the American Telephone and Telegraph Company. Pertinent parts of Exhibit R-14 are shown below in Table G.

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TABLE G.
TELEPHONE OPERATING REVENUES AND DEDUCTIONS—NEW YORK TELEPHONE COMPANY.
(Ex. R-14, condensed.)

Acct. No.	Year 1911.	Year 1912.	Year 1913.	Year 1914.	Year 1915.	Year 1916.
Telephone Operating Revenues.						
500-504	\$3,476,289	\$3,800,547	\$4,106,378	\$4,463,666	\$4,713,969	\$5,207,770
510-512	1,720,006	2,064,422	3,081,946	2,975,295	3,568,077	4,081,862
516	82	29,318	39,154	38,790	38,548	44,175
520-526	Miscellaneous operating revenues (except licensee revenue, Dr.)	6,903,287	7,317,478	7,477,621	8,320,584	9,343,327
	5,106,987	284,823	307,702	317,707	343,282	303,574
527	223,965					
	Less licensee revenue, Dr.	\$6,518,464	\$7,000,086	\$7,159,824	\$7,977,302	\$8,049,953
	Total telephone operating revenue	2,177		53		
	Other operating revenues					
	Total operating revenues	\$6,518,464	\$7,011,883	\$7,159,877	\$7,977,302	\$8,049,953
Telephone Operating Expense.						
601-607	\$910,071	\$924,254	\$1,105,892	\$1,028,738	\$1,132,593	\$1,168,001
608	1,041,235	1,106,775	1,244,897	1,365,047	1,443,584	1,543,187
	Total current maintenance	2,060,299	2,350,889	2,393,835	2,576,177	2,711,188
621-633	884,231	919,156	1,032,040	1,121,643	1,208,862	1,373,562
640-650	623,190	678,504	783,577	762,206	707,370	862,240
660-676	104,686	148,770	182,268	280,594	203,280	290,660
	Total general and miscellaneous expenses	\$3,831,458	\$4,298,464	\$4,565,905	\$4,880,719	\$5,227,640
	Total telephone operating expense		426	146		
	Other operating expense					
	Total operating expense	\$3,831,458	\$4,298,890	\$4,565,451	\$4,880,719	\$5,227,640
	Total other deductions	428,323	444,914	486,098	543,041	791,171
	Total all deductions	\$4,044,706	\$4,743,804	\$5,051,549	\$5,373,760	\$6,018,811
	Balance—net earnings from operations	\$226,286	\$2,260,573	\$2,108,328	\$2,603,542	\$2,931,142

The operating expenses for the year 1916 plus taxes and like items amount to \$6,018,811 (Ex. R-17, p. 1).

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TABLE H. INCOME STATEMENT (ADJUSTED IN ACCORDANCE WITH THE BASIS USED IN APPRAISING PLANT AND WORKING CAPITAL), NEW JERSEY DIVISION OF NEW YORK TELEPHONE COMPANY.						
	Year 1911.	Year 1912.	Year 1913.	Year 1914.	Year 1915.	Year 1916.
Operating Revenues.						
Total operating revenues as shown by books.....	\$4,972,982	\$6,518,464	\$7,011,863	\$7,159,877	\$7,977,302	\$8,940,953
Interest earned on bank balances here credited as operating revenue in accordance with the appraisal of working capital.....	14,500	14,121	9,151	10,524	15,552	14,737
Interest during construction here credited as operating revenue in accordance with the appraisal of plant.....	44,543	69,161	74,246	51,207	52,130	98,606
Total operating revenues.....	\$5,032,035	\$6,601,746	\$7,095,260	\$7,221,608	\$8,044,984	\$9,053,386
Operating Expenses and Deductions.						
Total operating expenses and deductions as shown by books, Estimated amount charged to surplus but properly chargeable to operating expense on account of bonus paid employees.....	\$4,044,706	\$4,287,891	\$4,743,804	\$5,051,549	\$5,373,760	\$6,018,811
Total operating expenses and deductions.....						137,005
Estimated amounts charged to general expense accounts 661 to 667, but properly chargeable to fixed capital in accordance with the appraisal of plant.....	\$4,044,706	\$4,287,891	\$4,743,804	\$5,051,549	\$5,373,760	\$6,156,416
Estimated amounts charged to relief department and pensions account 672, but properly chargeable to fixed capital in accordance with the appraisal of plant.....	• 19,403	• 30,127	• 32,342	• 22,306	• 22,708	• 42,992
Estimated amounts charged to commercial expense, but properly chargeable to fixed capital as cost of securing stations in accordance with the appraisal.....	• 5,215	• 8,097	• 8,692	• 5,996	• 6,103	• 11,554
Estimated amounts charged to expenses through account 527, licensee revenue, Dr., and properly chargeable to fixed capital as engineering expense in accordance with appraisal.....	• 56,272	• 53,179	• 56,328	• 38,297	• 50,751	• 65,401
Total operating expenses and deductions.....	• 6,063	• 9,414	• 10,106	• 6,970	• 7,096	• 13,435
Balance—net earnings from operations.....	\$3,967,753	\$4,187,074	\$4,636,336	\$4,977,981	\$5,287,102	\$6,023,034
• Red figures on original exhibit.	\$1,074,282	\$2,414,672	\$2,458,924	\$2,243,627	\$2,767,882	\$3,040,352

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From these expenses should be deducted, according to the company, four items respectively of \$42,992, \$11,554, \$65,401 and \$13,435, shown in the last column of the income statement of R-17, these being transfers which have gone into the capital account according to the company, under the appraisal. This makes a total operating expense for the year of \$5,885,429 and it leaves a net revenue for the year of the difference between this sum and \$9,063,386 or \$3,177,957. The company, however, claims that \$137,605, which was voted to the employees as a bonus from surplus should be deducted from this amount. It appears from Mr. Trax's testimony that the surplus for the year was unusually large. This bonus having been voted out of such surplus, Petty treated it not as an operating expense but as a gift from surplus. It was so charged on the books of the company.

Jackson testified that not less than \$110,387 should be added to net earnings from operation because the company had, in his judgment, appropriated not less than that sum in excess of needs, to the depreciation reserve. On the Jackson testimony, therefore, the company's net earnings from operation would be \$3,177,957 plus \$110,387, or \$3,288,344. Petty's testimony indicates that the addition for excess appropriation to depreciation for the year 1916 from the book evidence of the requirements is \$394,544 and adding this to the \$3,177,957, makes the net earnings for the year 1916 \$3,572,501.

Therefore, it appears that, after making the various adjustments indicated, the company claims that the net earnings for the year 1916 amount to \$3,040,352. That these earnings according to the Jackson calculations amount to \$3,288,344, and that according to Petty they amount to \$3,572,501.

4. REASONABLE ANNUAL DEPRECIATION APPROPRIATIONS.

In the foregoing the testimony in regard to depreciation appropriations has been discussed. Certain collateral testimony by Mr. Grace on behalf of the company was put in to indicate that the company has not been appropriating excessively to its depreciation reserve, and Mr. Whittemore put in an extensive argumentative statement to the same effect.

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The growth of depreciation reserve, however, has been very rapid during the last three years as is shown by the table on page 9 of Exhibit C-39, and the relatively great stability of the plant at the present time is indicated by the chart exhibits introduced by Mr. Grace, which are associated with tables such as page 11 of Exhibit R-16.

The Jackson Exhibit C-18 shows that the depreciation reserve during the first six months of 1916 increased by an amount which is 57.5 per cent. of the book increase of the property during that six months, and the Petty testimony shows that a like increase continued throughout the year 1916, which indicates that the Jackson and Petty estimates are within the borders of reason.

In this case the depreciation reserve at the end of 1916 was 17.26 per cent of the capital account on June 30th, 1916, shown by an analysis of the company's ledger (see Ex. C-39, p. 9), while the accrued depreciation of the plant is accepted by the engineers of both sides to be 13.4 per cent., excluding land and rights of way, which prorates into 12.56 per cent. of the total property including land, and rights of way. The Jackson testimony points out that, even with the proposal of 5 per cent. appropriation for depreciation which he considers ample for the purpose, the depreciation reserve will continue to grow compared with the reproduction cost of the plant, and consequently the 17.26 per cent. reserve will gradually increase even with the reduction of depreciation appropriations which he testifies to.

5. THE BASE ON WHICH FAIR RETURN IS TO BE ALLOWED.

This base follows from the figures in sections 1 and 2 hereof. Taking \$31,665,000 as the fair value of the physical property new and deducting therefrom 13.4 per cent, which is the accepted depreciation of the property, namely, \$4,243,000, would leave approximately \$27,422,000 for the physical property. Adding thereto the company's figure of \$1,075,126 for working capital including materials and supplies, and also adding thereto \$837,171 which is the company's figure for preliminary organization

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and development, and also adding thereto \$717,914 which is the company's figure for commercial cost for securing stations give a total of \$30,052,211, which is approximately \$30,000,000. This may be accepted as a round figure for the fair present value of the property including the intangibles.

6. RATE OF RETURN.

This Board has considered this question as related to other telephone companies. In the case of the Delaware and Atlantic Telegraph and Telephone Company (Vol. 1, p. 519, Reports of Board) it was said "a return of 8 per cent. on the fair value of the company's investment seems to us fairly equitable when consideration of all conditions is taken." It will be observed that this return takes into account the fact that the technical apparatus of telephone plants is still in process of change, and also that the proper allowances for depreciation are still somewhat conjectural.

We conclude that 8 per cent. is, under the circumstances disclosed by this record, a proper allowance in this case for a fair return on the reasonable value of the property.

7. SURPLUS FOR 1916.

Under section 3 hereof it is pointed out that the net revenue for 1916 set forth by the company (Ex. R-17) is claimed to be \$3,040,352; it is further pointed out in section 3 that certain charges are included in the aforesaid exhibit which are more particularly the bonus to employees which was voted out of surplus and was not treated as an operating expense, and an unduly large appropriation for depreciation.

It is also shown in that section that net earnings from operations for 1916 according to Petty were \$3,572,501 and that the minimum net earnings for operation for 1916 according to Jackson were \$3,288,344.

If the fair value of the property is taken as \$30,000,000 as of

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June 30th, 1916, and a return of 8 per cent. is allowed, the return for 1916 would be \$2,400,000, namely, 8 per cent. of \$30,000,000; the \$30,000,000 being taken as the average value of the property for 1916 and the return of \$2,400,000 being for the calendar year 1916. Deducting this amount from the net revenue from operations according to Petty, namely, \$3,572,501, leaves a surplus for the year of \$1,172,501; or taking the minimum net earnings from operation, according to Jackson, namely, \$3,288,344, and deducting the return of \$2,400,000 leaves a surplus of \$888,344; or taking the net earnings from operation as claimed by the company, namely, \$3,040,352, and deducting the return of \$2,400,000 leaves a surplus of \$640,352.

On the record as a whole it reasonably appears that the surplus or excess of net earnings for the year 1916 is approximately that indicated by the Jackson figure of \$888,344.

The exercise of the state's rate regulatory power involves not merely the consideration of questions of law, but matters of business administration under the law, as well.

Since the rates to be prescribed by order are to be operative in the future it follows that, in the exercise of the power of regulation, past conditions and experience thereunder alone cannot be taken into account. The future and the conditions under which the rates prescribed are in fact to be applied must be considered.

As was said by Justice Harlan in *Smyth v. Ames*, 169 U. S. 466,

"the probable earning capacity under particular rates prescribed * * * * *
and the sum required to meet operating expenses are * * * * * matters
for consideration."

Especially is this so, where, as here, a long period of time necessarily elapsed in making the inventory and appraisement of the property and in hearings, and, consequently, the data which forms the basis of the exercise of the power relates to a date already some time in the past. In the meantime conditions have materially changed, annual taxes have increased; special war taxes have been and will be imposed; the trend of the cost of labor and materials has been substantially upward, and the proof in fact shows

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that operating expenses have been and are on a steadily ascending scale.

Having regard for these considerations, the judgment of the Board, on the entire record, is that, in holding the balance even between the utility and its patrons, protecting the company in a fair return in the future and its patrons against the exaction of unreasonable rates—the rates of the company should be readjusted so as to effect a reduction of \$800,000 in its annual net earnings.

The Board, therefore, will order the New York Telephone Company within sixty days from the date hereof, to file with it, for action thereon by the Board, tariffs which will effect annually a reduction of net revenue of not less than eight hundred thousand dollars (\$800,000).

Dated November 20th, 1917.

ORDER.

This case having been duly heard by the Board of Public Utility Commissioners, and full investigation of the matters and things involved having been had, and the Board having, on the date hereof, made and filed a report containing its findings of fact and conclusions thereon, which report is hereby referred to and made a part hereof, the said Board of Public Utility Commissioners FINDS AND DETERMINES that the rates charged by the New York Telephone Company are unjust and unreasonable, and

HEREBY ORDERS the New York Telephone Company to file with it, within sixty days from the date hereof, for action thereon by the said Board, tariffs which will effect annually a reduction of net revenue of not less than eight hundred thousand dollars (\$800,000).

This order shall become effective December 31st, 1917.

N. Y. Tel. Co. and Del. and Atl. Tel. and Tel. Co.—Approval of Merger.

No. 488.

IN THE MATTER OF THE APPLICATION OF NEW YORK TELEPHONE COMPANY AND THE DELAWARE AND ATLANTIC TELEGRAPH AND TELEPHONE COMPANY FOR THE APPROVAL OF A MERGER AND CONSOLIDATION OF THE TWO COMPANIES.

1. Application is made for permission to consolidate The Delaware and Atlantic Telegraph and Telephone Company and the New York Telephone Company.

2. The Delaware and Atlantic Company owns and operates a telephone system in the southerly and westerly parts of New Jersey. The New York Telephone Company owns and operates a telephone system in the State of New York extending into the northerly and easterly parts of New Jersey.

3. The Board holds the consolidation of the properties in question should be limited to the property located within New Jersey, thus segregating the property within New Jersey from the property without the state and thereby creating a unit wholly within New Jersey.

Robert V. Marye and John L. Swayze, for the petitioners.

Application is made by New York Telephone Company and The Delaware and Atlantic Telegraph and Telephone Company for permission to consolidate The Delaware and Atlantic Telegraph and Telephone Company with New York Telephone Company, thereby combining in the New York Telephone Company "full ownership and control of all the property, franchises, powers and privileges owned and belonging to, or exercised by, the two corporations separately."

The New York Company is a corporation organized and existing under the laws of New Jersey and New York. It owns and operates a telephone system in the State of New York extending into the northerly and easterly parts of the State of New Jersey.

The Delaware and Atlantic Company is a corporation organized and existing under the laws of the State of New Jersey. It owns and operates a telephone system in the southerly and westerly parts of the State of New Jersey.

The two corporations belong to a group of associated telephone companies rendering service throughout the several states of the United States, commonly referred to as the Bell system. They

N. Y. Tel. Co. and Del. and Atl. Tel. and Tel. Co.—Approval of Merger.

are not in competition in New Jersey, each operating in a different part of the State. Physical connection between the two systems, however, permits of an interchange of telephone communication between the patrons of the respective systems.

The Delaware and Atlantic Company has outstanding 47,285 shares of capital stock of the par value of \$100 each. All of these shares are now owned by the New York Company, except 45 shares held by members of the board of directors of the Delaware and Atlantic Company.

The stated purpose of the proposed consolidation is "the unifying of the service rendered throughout the State, and the securing of greater economy and efficiency in management and operation." It is further claimed that, to that end, "the territorial unit should be *at least* co-extensive with the boundaries of the State" of New Jersey.

In the judgment of the Board consolidation of the properties in question should be limited to the property located within New Jersey, thus segregating the property within New Jersey from the property without that State, and thereby creating a unit wholly within that State. Such segregation and consolidation of properties should be effected through the transfer thereof to a corporation organized under the laws of the State of New Jersey.

This course was suggested to the petitioners, and it will evidently be in accord with the general policy adopted by the Bell system. At the hearing of this matter, counsel for the companies said: "There is an effort now of the Bell system to change its corporate organization entirely so as to conform to the area of jurisdiction of the various state regulatory bodies. We have had some thirty odd operating companies, and they lap over from state to state, and it has been very inconvenient in making so many different reports."

Instead, however, of dismissing the petition, the Board will hold the same, with leave either to amend in accordance with the views herein expressed, or to file a new petition in conformity therewith. On such amended or new petition, the Board will determine the value of the property for purposes of capitalization using therefor the findings as to value in the proceedings relating to the rates of the companies respectively.

Dated November 20th, 1917.

Millville Electric Light Co.—Permission to File Tariff Increase.

No. 489.**IN THE MATTER OF THE APPLICATION FOR PERMISSION TO FILE
A TARIFF CARRYING INCREASES IN CHARGE FOR ELECTRICITY
SOLD BY MILLVILLE ELECTRIC LIGHT COMPANY.**

S. J. Franklin, for the petitioner.

Louis M. Miller, for the City of Millville.

Application is made for permission to increase cost of electrical energy for power. The change is based upon the probable increase in the cost of coal. At present the company purchases a part of the energy sold and generates the balance, using water power as prime mover. It uses no coal for generating. Until we are able to determine the reasonableness of a proposed schedule from the experience of the company, we are not disposed to permit of increases. At present the price of coal cannot affect the company.

If, and when, the company puts in operation its new plant, it believes it can be shown that the proposed increase is reasonable and bears a proper relation to increase in cost of production, the Board will grant a further hearing in this matter. Permission to make the schedule effective now will be withheld.

Dated November 20th, 1917.

Mountain Ice Co. v. Delaware, Lackawanna and Western R. R. Co.

No. 490.

MOUNTAIN ICE COMPANY

vs.

DELAWARE, LACKAWANNA AND WESTERN RAILROAD COMPANY.

ON RE-ARGUMENT.

A petitioner is not injured when the Board, finding that a complaint of an unreasonable rate is not supported by the record, makes an independent study and states the result thereof in its decision.

Carlyle Garrison, for the petitioner.

John L. Seager, for the respondent.

In January, 1916, the Board filed its report following inquiry as to whether the rates then in effect for the transportation of ice between points in New Jersey were just and reasonable, and whether certain proposed increases thereof were justified. The Board concluded that the rates were just and reasonable, but that the proposed increases had not been justified.

Thereafter the petitioner prayed leave for an opportunity to re-argue the matter. This leave was granted and the matter was held by the Board for a long period of time awaiting briefs. More recently counsel for petitioner advised the Board that further opportunity for discussion by brief was not desired and submitted the case for consideration.

After carefully considering the testimony and the statements in the petition for re-hearing, and the arguments thereon, we conclude that no change should be made in the conclusions heretofore reached.

Mr. Garrison, for the petitioner, alleged two principal grounds of error in the Board's report: First, that the cost of transporting ice was not the same as the average cost of transporting all com-

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modities, carloads and less than carloads, and, second, that the Board had gone outside the record for figures upon which it based its conclusion.

In support of his first contention Mr. Garrison quoted from Commissioner Prouty's decision in the Interstate Ice case between the same parties.

On page 14 of the petition for re-argument he says, quoting from the report of the Interstate Commerce Commission:

"Our general impression is that the average cost of handling a ton of this ice from Gouldsboro (Pennsylvania) to Secaucus upon an average load of 27 tons to the car in solid trains, would be much less than the average cost of handling all business, carload and less than carload upon the line of the Lackawanna." * * *

"On what theory can it be assumed that this traffic should pay in proportion to the number of tons exactly the same contribution to these fixed charges that all other traffic pays. Can it be said that every ton of this ice shall pay as much to the return of the holders of this property as does a ton of silk? The tariffs of this defendant are constructed and ought to be constructed upon an entirely different theory." 15 I. C. C. 305 (at p. 319).

The petitioner is in error, however, in the assumptions made in this regard. The average cost of transporting ice between points in New Jersey was figured in the Board's report at a level much below the general average of the carload and less than the carload traffic.

The actual load per car of ice, together with the actual load per car of all other commodities, was considered, and allowance made for the heavy loading of ice. The Board's computation included no amount whatever for loss and damage payments. The record showed that loss and damage payments on ice were infrequent and for small amounts.

The empty car movement in connection with the ice traffic was likewise considered by the Board. The statement of counsel for petitioner (p. 11 on re-argument), that "ice is handled in trains of at least fifty loaded cars with practically no empties," is not supported by the record.

Ice is handled in long trains from Port Morris east, but ice is brought into Port Morris from the branches and from the Sussex Railroad in short trains of ten or twelve cars and the grade against some of this traffic is severe.

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The question of rate of return was also argued by counsel for petitioner. On page 4 of record he said: "Can it be said that every ton of this ice shall pay as much return to the holders of this property as does a ton of silk?" The Board's report shows that the low value of ice was taken into consideration and that the rate of return allowed on the ice traffic was but 4 per cent. Deductions from operating expenses and deductions from the value of the property for less than carload traffic were made. The Board's report allowed a rate which would pay 4 per cent. on the carload traffic only.

At the hearing counsel for the Mountain Ice Company declared he was not prepared to state what he considered a fair rate upon the investment or that a rate of 4 per cent. return upon the investment was too high.

The second contention of the Mountain Ice Company is that the Board did not confine itself to the record. Numerous citations were included in the petition for re-hearing, to the effect that a commission cannot base its findings upon matters not in the record or upon the results of its own investigations.

In this case the Board did not base its conclusions on matters outside of the record. It found that the Mountain Ice Company had failed to show that the rates complained of were unjust and unreasonable. After reaching this conclusion upon the record, in order, however, to be sure that the complainant was being fairly treated by the carrier, an independent study was made, and the results of this study were stated in the report.

Without its own investigation, the Board was obliged to determine that the petitioner had not sustained its allegation as to the unreasonableness of the rates in question. Following this investigation, the same conclusion was reached and such conclusion was included in the report.

Obviously the petitioner was not injured by this course, nor can it be said that the Board's conclusion does not rest entirely upon the proofs contained in the record.

The Board concludes, therefore, that the prayer for a change in its finding must be denied.

Dated November 22d, 1917.

Board of Education of Middlesex Borough v. Public Service Railway Co.

No. 491.

BOARD OF EDUCATION OF MIDDLESEX BOROUGH

VS.

PUBLIC SERVICE RAILWAY COMPANY.

1. A regulation by an electric railway that tickets for the transportation of school children sold at a reduced rate shall not be accepted before 8 A. M. or after 5 P. M. is reasonable.

2. School tickets have always been accepted in any fare zone. To limit the use of this form of ticket to a particular zone would involve an increase in an existing rate. Such limitation is not shown to be reasonable.

John F. Reger, for the complainant.

L. D. H. Gilmour, for the Public Service Railway Co.

Augustus C. Thomae, in person.

The first complaint in this matter was a letter from Augustus C. Thomae dated December 14th, 1916, regarding the refusal of the Public Service Railway Company to accept school tickets before 8 A. M. His daughter was a pupil in the Plainfield High School and had been accustomed to using school tickets on the trolley car out of Bound Brook 7:23 A. M. for Plainfield in order to reach the school at 8:30. On December 28th, 1916, the Board received a communication from the District Clerk of the Board of Education of the Borough of Middlesex, making a similar complaint about the company's refusal to accept the school tickets as charged in Mr. Thomae's letter. The Board filed these communications as formal complaints and proceeded to investigate them at the same hearings. Depositions were taken April 11th and May 16th, at Newark. Owing to some misunderstanding between counsel, their briefs were not filed until September 28th and November 18th, respectively.

The Public Service Railway Company issues two forms of

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school tickets, the first form, green in color (Exhibit R-2 for defendant), reads "Good for one ride within 5c. fare limits during school hours, for pupils going to or from school on lines operated by Public Service Railway Company. Not good on Saturdays, Sundays or holidays." On the cover of the school ticket book is printed, "These tickets are good only during school term and on class days between 8 A. M. and 5 P. M. They will not be honored at any other time of day, or on Saturdays, Sundays or holidays." These are sold at the rate of 3c. each.

The second form, brown in color (Exhibit R-3 for defendant), reads "Piscataway school ticket. Good for one fare, to or from school only, in city limits; otherwise privilege of use will be forfeited. Not good on Saturdays, Sundays or holidays." On the back of this form of ticket is printed "Good for one ride in Piscataway Township during school hours, for pupil under 16 years of age, going to and from school. Not good on Saturdays, Sundays or holidays." This last form of ticket is purchased at the rate of 2½c. each.

Both of these forms of transportation are used by pupils from Middlesex Borough and Piscataway Township attending the Plainfield High School. The rule of the company against accepting such tickets prior to 8 o'clock in the morning has not been rigidly enforced.

Counsel for the Board of Education in his opening said: "The only complaint which we have to make now is the refusal of the company to accept the tickets at the Borough of Middlesex on the car which leaves there at 7:23 when the pupils are required to leave in order to reach Plainfield in time to attend the morning session (of school). We claim the right to have the pupils transported and these tickets accepted by the company under the provisions of a contract, not under the ordinances, but under the provisions of a contract made between the Middlesex and Somerset Traction Company, predecessor of the Public Service Railway Company and the Board of Education of the Township of Piscataway, by which contract it was provided "that the traction company for one dollar and the privilege of a right of way across the school house lot known as school property No. 9 in said township to move the present school house building to a different loca-

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tion, build a substantial fence and a further consideration to carry upon the cars belonging to the said party of the first part (traction company) the school children living within said township in closed cars during the school year, as far as convenient, and to sell school tickets to the said party of the second part (Board of Education) for the sum of two dollars and a half per hundred, or twenty-five dollars per thousand." Nothing is said in the contract just referred to as to the time when the school tickets must be used.

We have examined the various franchise requirements and contract referred to of the several municipalities through which respondent's cars operate and through which Mr. Thomae's daughter must ride in order to reach the Plainfield High School from Bound Brook and find the following various provisions:

(a) Bound Brook. There is no provision in the ordinance granting permission to the street railway company to lay tracks in this borough relating to school tickets.

(b) Piscataway Township. July 6th, 1897.

"Sec. 5, para. 9. The fares to be charged on said route in said township shall be five (5) cents on each side of the property of Daniel Bonham: children under four (4) years of age shall ride free, school tickets shall be sold for not more than three (3) cents per ride for school children and teachers attending school in said township."

August 3d, 1897.

"Sec. 5, para. 9. The fares to be charged on said route in said township shall be five (5) cents on each side of the property of Daniel Bonham; children under four (4) years of age shall ride free, school tickets shall be sold for not more than three (3) cents per ride for school children and teachers attending school in said township."

April 20th, 1898.

"Sec. 5, para. 9. The fares to be charged for the transportation of passengers on said route in said township shall not exceed five (5) cents: children under four (4) years of age shall ride free. School tickets shall be sold for not more than three (3) cents per ride for school children and teachers to and from school."

Agreement, dated April 17th, 1903.

"to carry upon the cars belonging to the said party of the first part or to their successors or assigns, the school children living within said township in closed cars during the school year, as far as convenient, and to sell school tickets to the said party of the second part for the sum of two dollars and a half per hundred, or twenty-five dollars per thousand."

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(c) April 2d, 1900.

"and said traction railway company shall issue school tickets for a sum not to exceed three (3) cents per ride for school children and school teachers, and said school rates shall apply to children going from Dunellen schools to Plainfield schools and to Bound Brook schools."

(d) Plainfield. April 27th, 1891.

"School tickets shall be sold for three cents to all children actually attending school and to all teachers engaged in teaching school within the City of Plainfield."

Counsel for the railway company states (page 21): "They (scholars) can take these tickets, they can use them on cars running after 8 o'clock and go to any school in the township in plenty of time for school. But these people want to cross two fare zones and in some places three."

"The company sells the three cent school ticket and it is acceptable at Dunellen. They sell the two and a half cent school ticket in Piscataway Township and it is acceptable there, but they will not accept either of these tickets before 8 o'clock A. M. and after 5 o'clock P. M."

It was alleged in the proceedings that the selling of the green school tickets at 90 cents per book of 30 tickets, while the Board of Education of Middlesex Borough and Piscataway Township were sold the brown school tickets for $2\frac{1}{2}$ cents, is an unjust discrimination. The criticism may be well founded; but the special rate of fare given the Board of Education of Piscataway Township was fixed by an agreement made and entered into, for valuable consideration, prior to the passage of the act creating the Board of Public Utility Commissioners in this State, and under the decision of the Court of Errors and Appeals in the case of *Public Service Electric Co. v. Board of Public Utility Commissioners*, 98 Atl. Rep., page 1013, such contract is binding and enforceable in our courts. Where the terms of a contract are ambiguous and interpretation of its meaning necessary, that dispute must be settled in our Court of Chancery.

The question, "Whether either the ordinance or the contract obligates the company to sell tickets to the Board of Education of the Borough of Middlesex which are good for a ride outside of the borough limit," is asked.

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From the record before us we are not obliged to answer this question. It seems settled by existing conditions and the acts of both parties. If there is to be any change in the present form of the Piscataway school ticket and the contract on which it is based, that matter apparently should be settled in the courts. As to the other form of green school ticket sold for 3 cents counsel for the company (page 49) says: "We accept the tickets. We issue this general ticket which is good within the 5-cent limits. We cannot say to a scholar in Plainfield you must use this ticket within the limits of Plainfield, or to a scholar in Piscataway you must use it within the limits of Piscataway, otherwise we would have to have one hundred and fifty forms of tickets, so that while under the rule, and under the usage the tickets are supposed to be used within the limits of the borough or municipality where they are issued, while that is always understood, yet we cannot check the thing up and prevent their being used over two or three fare zones and the custom has grown for that reason so that they are used over more than one fare zone."

The following colloquy on page 64 bears on the same matter:

Mr. Reger—"Our claim is if the Board should assume it has no jurisdiction over the contract it would still be governed by the terms of the ordinance. I think Mr. Gilmour waives that question of jurisdiction."

Mr. Gilmour—"I waive nothing, except I say it is not raised here, that is not the question before the Board. We are accepting the tickets therefore I cannot say that the agreement under which the tickets were provided for is disputed, because we are accepting the tickets."

Commissioner Donges—"The only question is as to the regulation."

Mr. Gilmour—"Yes, sir."

The real controversy is whether the general rule and regulation of the company limiting the use of school tickets between 8 A. M. and 5 P. M. is reasonable.

Our judgment is that the said rule or regulation of the company that tickets for the transportation of school children at the 3-cent fare shall not be accepted before 8 A. M. and after 5 P. M., is, in this case, reasonable, provided the running schedule of cars is fairly arranged to provide proper service for those attending public schools. The testimony shows that the company is meeting these practical operating conditions by accepting school tickets on the 7:53 A. M. car from Bound Brook, which is a proper con-

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cession. Should public school requirements compel pupils to be in attendance prior to 8:30 A. M., a different rule or regulation may properly be required of the company.

The Board finds that the school ticket sold at 90 cents per book of 30 tickets "good for one ride within 5-cent limits during school hours, for pupil going to or from school on lines operated by Public Service Railway Company" establish an existing individual rate, or special rate or charge, within clause (h) of section 17 of the act creating this Board. Such tickets have always been and continue to be accepted between the hours of 8 A. M. and 5 P. M. from school children in any fare zone. They should be so accepted. Any attempt to limit the use of this form of ticket to a particular zone would involve the increase of an existing rate or charge to be paid for the transportation of pupils, and would further involve a change or alteration in existing classification of rates and charges. There is nothing in the present case which would justify the Board in permitting any change in the form of said 3-cent school ticket. With the understanding the company will continue to accept this form of ticket in any fare zone, the complaint is dismissed.

Dated December 3d, 1917.

No. 492.

IN REGARD TO RULES TO BE OBSERVED BY EACH UTILITY WHICH HAS FILED OF MAY HEREAFTER FILE A COAL CLAUSE AS A SECONDARY CHARGE TO BE ADDED TO ANY OF ITS EXISTING SCHEDULES OF RATES.

CONFERENCE RULING NUMBER FOURTEEN.

At a conference of the Board, held December 12th, 1917, the following rule was adopted:

1. Each coal clause shall be properly derived from the history

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of the applicant, but on the basis of efficient operation of the plant.

2. The average true cost per ton (2,240 lbs.) of bituminous coal delivered to the generating plant or plants of the utility during 1916 will be considered as the *normal* cost.

3. The same percentage of the normal cost of coal per ton (2,240 lbs.) proposed for each step in the secondary rate shall be applied to the normal true cost of coal per kilowatt hour of current generated; the result will determine the amount of each step in the secondary charge to be applied to existing rates, plus or minus, per kilowatt hour billed.

4. When a coal clause is offered for filing as a secondary charge to be applied to existing schedules of rates, it must be offered on the express stipulation that it is to be applicable only during the stress of war, and that it is to be abolished entirely when conditions revert to normal.

5. Each utility which has filed heretofore, or may file hereafter, a coal clause as hereinbefore set forth, shall file in duplicate for each calendar month with the Secretary of the Board of Public Utility Commissioners, five days before any charge thereunder may be applied, the following information, verified by a responsible official before an officer qualified to take affidavits, viz.:

- A. With respect to each individual firm or corporation which furnished coal on which the secondary charge is based:
 - (a) Name and address.
 - (b) Tons of coal furnished during the calendar month.
 - (c) The true cost per ton, of 2,240 pounds, actually paid or to be paid.
 - (d) The point of shipment, and point of delivery.
 - (e) The freight to destination.
 - (f) The cost of cartage, etc., alongside the generating station or stations.
- B. The determination of the average price of coal delivered alongside the generating station or stations of the utility shall be made for each calendar month, and all secondary charges based upon such determination shall be applicable to the bills rendered covering current used in the classes subject to such

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secondary charge during the next succeeding month, and the details of the calculation by which the average price is arrived at shall be filed.

If, for any reason, the utility cannot ascertain the correct average cost at a sufficiently early date for billing, the average cost for the preceding billing period may be used provided suitable adjustments are made to all accounts affected thereby in the next succeeding month.

- C. The kilowatt hours of current generated during the same calendar month as the determination of the average price is made, by classes of consumption, if possible.
 - D. When ascertained, the total number of kilowatt hours of current sold during each calendar month to which the secondary charge, theretofore determined, has been applied, by classes.
- This ruling shall be effective on and from January 1st, 1918.
Dated December 12th, 1917.

No. 493.

JAMES T. ACKERMAN

vs.

PUBLIC SERVICE ELECTRIC COMPANY.

- 1. The question whether poles are maintained lawfully by a public utility along a public highway is not within the jurisdiction of the Board to determine.
- 2. The allegation that a pole line and the wires thereon are not properly maintained not being adequately supported, complaint is dismissed.

James T. Ackerman appeared in person.

L. D. H. Gilmour, for the respondent.

The petitioner in this case alleges that he is an owner of property in Midland Township, Bergen County, located on the south-

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easterly corner of Paramus Road and Ridgewood Avenue, along which are placed large electric light poles maintained by the respondent, numbering about six poles along the complainant's property; and complainant further alleges that the poles were so placed against his wishes and in defiance of his rights and demands.

As a special cause of complaint, he further alleges that "at the crossing of Ridgewood Avenue and Paramus Road, and on the complainant's property, there were two poles so placed as to be dangerous to traffic and travel, the same being placed out in the roadway on the two opposite corners, the northwesterly and southeasterly, whereby the road is narrowed by reason thereof, making it impossible to pass and turn the corner without collision." The allegation was further made that as a result of the position of these poles frequent accidents had occurred at said place, that complainant's fence had been damaged and broken, and tall trees greatly damaged by having been electrically shocked through contact with these high and heavily charged wires and that by reason thereof many of these trees had died and others were dying.

Complainant further requested that by virtue of the power conferred upon this Board by Chapter 195, Laws of 1911, and the laws amendatory thereof, that a hearing be granted where proof might be presented of all the matters above set forth to the end that the Public Service Electric Company might be required to so construct and maintain its plant along the above mentioned highway as to furnish safe, adequate and proper service, and that the nuisance, alleged to be maintained, might be abated. Answering, counsel of the respondent admitted that it owned the poles as alleged, but denied that they were placed in position against the wishes of the then owner of the property or in defiance of his rights and demands; the respondent admitted that the petitioner had demanded the removal of the poles and that the respondent had refused to remove same, and denied all other allegations in the petition; the respondent further claimed that the "question of the right to maintain poles in front of the property of the petitioner was not one within the jurisdiction of this Commission."

A hearing on the issues joined as above set forth was held in Newark on June 27th, and the Board divided the consideration of the matters at issue into two heads, viz.:

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First: It was admitted that the poles in question were actually in place as alleged. The Board ruled that the contention of the respondent that this question was not within the jurisdiction of this Board was based on the law and would be sustained.

Second: The petitioner alleged that the poles and the high-tension wires supported thereon were maintained in such a manner as to endanger life and property. This allegation was denied by the respondent.

Chapter 195, Laws of 1911, creating this Board, under section II., provides:

"17. The Board shall have power, after hearing upon notice, by order in writing, to require every public utility as herein defined. * * *

"(b) To furnish safe, adequate and proper service and to keep and maintain its property and equipment in such condition as to enable it to do so."

Under this provision of the law the petitioner asked that the Board restrain the respondent from using the poles to support high-tension wires. On this point the presiding Commissioner ruled that the courts had held that this was a proper use of the wires and that any one damaged by reason of such use should seek his remedy in the courts and not by appeal to this Board (p. 17).

The allegation that the pole line and the wires supported thereon are not properly maintained by the respondent was not adequately supported by the evidence.

The presiding Commissioner suggested that, in view of the fact that both parties desired that traffic at the intersection should be safe-guarded in the interests of the public, the matter should be referred to the Board's engineer for recommendations looking to an improvement of the existing situation in a manner satisfactory to both parties. This suggestion was agreed to by the petitioner and the respondent.

Accordingly the Board's engineer inspected the pole line at the intersection of Ridgewood Avenue and Paramus Road and found that it was maintained in a manner such as to "furnish safe, adequate and proper service." He found that pole No. 242 (on diagram in respondent's answer) on the northwesterly corner, is set back such distance from the corner, within the curb line, as

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not to interfere with traffic, and that pole No. 241, at the south-easterly corner is set within the curb line but northerly of the fence line about four feet. The company agreed, however, in the interests of the public, to set this latter pole in a new position about 4.3 feet southerly from its present position (in line with the other poles southerly from No. 241), provided the respondent would give written consents to the relocation of the pole and to the passing of the supporting guys aerially over the corner of the latter's property at the fence line. The petitioner refused to give such consents unless they contained an agreement binding on the respondent, that the petitioner might revoke the consents by giving thirty days' notice by mail in writing to the Public Service Electric Company. The respondent claimed that such a proviso would obligate it to do something which it was not now obligated to do, and refused to reset the pole under such conditional and revokable consents.

The complaint in this case is therefore **DISMISSED**, and an **ORDER** will so enter.

Dated December 12th, 1917.

ORDER.

This case being at issue upon complaint and answer on file and having been duly heard and submitted by the parties, and full investigation of the matters and things involved having been had, and the Commission having, on the date hereof, made and filed a report, containing its findings of fact and conclusions thereon, which said report is hereby referred to and made a part hereof,

It is **ORDERED** that the complaint in this proceeding be and it is hereby **DISMISSED**.

Dated December 12th, 1917.

Morris County Traction Co.—Authority to Issue Bonds.

No. 494.**IN THE MATTER OF THE APPLICATION OF THE MORRIS COUNTY
TRACTION COMPANY FOR AUTHORITY TO ISSUE INCOME
DEBENTURE BONDS.**

1. It is proposed by a traction company to issue income debenture bonds with interest payable at such rate as the board of directors may determine, not to exceed five per cent. per annum, these bonds to retire second mortgage five per cent. bonds.

2. Issue is approved, it appearing that the proposed plan is reasonable, in no manner prejudicial to the public interest, and that the rights of no bondholder can be affected without his consent.

King & Vogt, for the petitioner.

The amended petition of the Morris County Traction Company, filed November 23d, 1917, says it proposes to issue, subject to the approval of the Board, "income debenture bonds to the amount of \$1,179,000 in denominations of \$1,000 each payable June 16th, 1948, with interest on the principal sum thereof at such rate, not exceeding 5 per cent. per annum, as the Board of Directors of the Traction Company from time to time shall ascertain, determine and declare, to be payable thereon, out of available surplus income of the said Traction Company as defined in a certain deed of trust or agreement dated June 18th, 1917, made by and between the holders of the Morris County Traction Company five per cent. first mortgage gold bonds, issued under its mortgage dated June 15th, 1906, and holders of the Morris County Traction Company five per cent. general mortgage gold bonds issued under its mortgage dated June 16th, 1913." The said general mortgage gold bonds are to be retired by the new debenture bonds and the said new debenture bonds are not to be a lien upon the property of the Traction Company.

The petitioner intends to issue in place of coupons numbered 25 to 34 both inclusive, now attached to the first mortgage bonds, new coupons payable at the same time and bearing the same numbers as the coupons now attached to said bonds, the only

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difference being that the new coupons call for the payment of interest at the rate of 1 per cent. semi-annually instead of $2\frac{1}{2}$ per cent. semi-annually; that such new coupons will only be attached to the bonds owned by the persons who agree to such change.

There has been no objection made to this plan of financing excepting a letter received from T. K. Van Dyke, dated November 22d, 1917, in which he claims to be the owner of \$10,000 of the first mortgage bonds and protests against the adoption of this plan. He did not appear further in the proceeding.

At the present time the Morris County Traction Company has outstanding \$3,000,000 par value of first mortgage bonds and \$1,179,000 par value of second mortgage bonds, each issue bearing interest at the rate of 5 per cent. per annum, whereby the company incurs each year a total liability for bond interest amounting to \$208,950. In no year thus far have the net earnings (i. e., gross revenue less operating expenses and taxes) equaled this amount, being \$91,960 thereunder in 1916, the most prosperous year the company has yet had. There appears to be no reasonable certainty in the immediate future that there will be sufficient net revenues to meet all the present fixed charges for bond interest.

For the purpose of reducing the latter to a point where there can reasonably be no question as to the company's ability to meet its fixed interest charges it proposes to adopt the plan as above outlined, namely, (1) to retire the \$1,179,000 of second mortgage bonds by issuing in place thereof a like amount of income debenture bonds bearing the same rate of interest, which, however, does not become a liability unless it is actually earned, thus reducing the fixed charges by \$58,950; (2) to further reduce these charges by \$90,000 per annum during the coming five years through the substitution of new coupons bearing interest at the rate of 1 per cent. semi-annually in place of those now attached to the first mortgage bonds bearing interest at the rate of $2\frac{1}{2}$ per cent. semi-annually, which fall due during this period.

By the adoption of this plan the company's fixed annual charges for bond interest during each of the next five years will be only \$60,000, which amount its net earnings during each of the past

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four years have exceeded, being almost double that sum in 1916. All net earnings in excess of \$60,000 after the payment of interest on equipment obligations and floating indebtedness amounting to a total of only \$6,796.37 in 1916 and the payment of rentals which will amount to approximately not more than \$30,000, will be deposited with the trustee under the agreement of June 18th, 1917, to be distributed by him pro rata among the first mortgage bondholders until each one of them has received in full 5 per cent. interest on the face value of his bond from the date of its issue to the time full payment is made. Not until such time will any interest become payable on the income debenture bonds now proposed to be issued.

The company has made application for the approval of a lease or trackage agreement between the petitioner and the Morris Railroad Company, dated November 2d, 1913. This will be passed upon by the Board later and an independent report filed. The approval of the present issue of securities must not be construed as in any manner approving the terms of the said lease or trackage agreement.

We find and conclude that the proposed plan of the Traction Company is reasonable and in no manner prejudicial to public interest. The rights of no bondholder can be affected thereby except with his consent. We therefore approve the proposed issue of income debenture bonds applied for.

A certificate will accordingly issue.

Dated December 18th, 1917.

No. 495.

IN THE MATTER OF THE APPLICATION OF THE ATLANTIC COUNTY
ELECTRIC COMPANY FOR AN INCREASE IN RATES.

1. An electric utility proposes to increase its charges at the rate of one-tenth of a cent per K. W. hr. for every sixteen and one-half cents above a cost of \$3.30 per ton for coal at the company's power plant. This is disapproved.

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2. An increase in charge of two-thirds of a mill per K. W. hr. for each sixteen and one-half cents above an average cost of \$3.30 for coal per month at the plant is approved.

3. So called free lights maintained for the city should be placed on a commercial metered basis and charged in accordance with the schedules for commercial metered lighting.

Myrtle Frank, for the petitioner.

G. Arthur Bolte and A. C. Goller, for Egg Harbor City.

Under date of October 8th, 1917, the Atlantic County Electric Company filed an application for an increase in its schedule of rates and asked for the approval of this Board to put the same into effect. The application was heard on October 22d, and the hearing was continued on November 3d. On November 3d, the company filed an amended petition, asking that the increase of rates necessitated by increased cost of operation be covered by a secondary charge to be added to the present existing schedules for commercial metered light and power rates; this secondary charge to be based on the price of coal purchased by the company, the proposed rule reading as follows:

"That for every sixteen and one-half cents increase in the price of coal per ton, above the price of \$3.30 per ton, we shall add one-tenth of a cent for each K. W. hr.; and in like manner making a reduction of one-tenth of a cent per K. W. hr. for every decrease in price of sixteen and one-half cents per ton of coal, until the same drops to \$3.30 per ton."

In the amended petition a basis for the above cited "coal clause" was stated in the following language:

"Taking the K. W. hr. sold in 1916 as a basis, the difference in the cost of coal amounts to 2.2 cents per K. W. hr. more for 1917. This increase amounts to one-tenth of a cent for every sixteen and one-half cents above \$3.30, being the price paid for coal by us in April, 1916."

Testifying on behalf of the company, its president, Mr. Myrtle Frank, stated that the cost of coal during 1916 averaged as follows:

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Cost of coal at the mine.....	\$1.35
Cost to freight to Egg Harbor City.....	1.70
Cartage from railroad to plant.....	.25
Total	\$3.30

Coal used during 1916..... 1,639 tons.

During recent months of 1917, the costs of coal had increased and were as follows:

Cost of coal at the mine.....	\$4.00
Cost to freight to Egg Harbor City.....	1.85
Cartage from railroad to plant.....	.55
Total	\$7.00

He made the following statement:

"Since the month of April, since the high price of coal, we have gone back \$2,400 net of our money absolutely lost."

The company did not submit any valuation of its property, did not prove the reasonableness of any specific rate of return, depreciation or operating expenses, or any basis for deriving the rates for different classes of customers, or for different quantities of current used during the month.

As the company's proposed schedule is based on the price of coal per kilowatt hour of current sold, it now becomes necessary to ascertain the fair cost of same during normal times and during the present era of high prices, in order to develop a proper addition for each sixteen and one-half cents increase in the cost of coal above the normal price of \$3.30 as proposed by the company. In the testimony offered by Dr. Frank, the statement was made that in 1916 the company used 1,639 tons of coal, or approximately sixteen pounds per kilowatt hour of current sold. This appears to be very excessive. The company's attention was called to this excessive use of coal. During 1917, however, improvements were made in its system, the feed water heater was introduced and a regulator damper installed, with the result that the plant records from October 6th to 16th showed that the actual consumption of coal per kilowatt hour generated was 9.13 pounds. If the steam piping

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be covered with insulation and other suggested improvements be made, it is probable that this consumption can be materially reduced; but, for the purposes of this report, we will take conditions as they now exist. Conditions having changed so with respect to the consumption in 1916, the figures offered for that year have no evidential value as to the future. If we take the base price of \$3.30 per ton during 1916 as normal, this would indicate a cost of 0.1473c. per pound of coal. Multiplying this by 9.13 pounds, used to generate a kilowatt hour, gives a cost of 1.3448c. per kilowatt hour generated. As shown on page 71 of the testimony, this is a fairer basis in the instant case for deriving the coal clause than one based on kilowatt hours sold, and is the only basis which has been allowed to be used in rates filed with the Board heretofore. The petitioner, however, bases the cost of current on the result of operating its plant inefficiently. We do not believe that that part of the cost which arises from such inefficiency should be charged to the consumer.

Increases or decreases in the rate are proposed to be based on sixteen and one-half cents variation from a base cost of \$3.30 per ton, according to the second petition of the company. This sixteen and one-half cents is five per cent. of the base price of \$3.30. Five per cent. of the cost per kilowatt hour generated, shown above to be 1.3448c. would indicate that the secondary charge should be 0.67 of a mill per kilowatt hour instead of the 0.1c. or one mill, provided for in the petitioner's coal clause. It is, therefore, apparent that the proposed schedule, as submitted, is not properly derived and will, therefore, not meet with the approval of the Board. If the company will file the following coal clause with this Board it will be received, subject to the challenge of any interested customer, to wit:

**COAL CLAUSE TO BE ADDED AS A SECONDARY CHARGE TO COMMERCIAL METERED
LIGHT AND POWER RATES.**

It is understood and agreed that the secondary charge for each kilowatt hour of electrical energy furnished hereunder shall be subject to an addition of two-thirds of a mill per kilowatt hour for each sixteen and one-half cents per gross ton of increase from an average cost for bituminous coal of \$3.30 to the Atlantic County Electric Company alongside of its generating station during each month; or to a deduction of two-thirds of a mill per kilowatt hour for each sixteen and one-half cents per gross ton of decrease in the average

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cost for bituminous coal of \$3.30 to the Atlantic County Electric Company alongside its generating station during each month.

It is stipulated, however, that this secondary charge is to be applicable only during the stress of war, and that it is to be abolished entirely when conditions revert to the normal.

As a basis for the secondary charge as hereinabove recited, the company shall file monthly with the Board of Public Utility Commissioners the following information, verified by a responsible official of the company before a competent officer qualified to take affidavits, viz.:

- (1) With respect to each individual firm or corporation which furnished coal on which the secondary charge is based:
 - (a) Name and address.
 - (b) Tons of coal furnished during the period.
 - (c) The true cost per ton of 2,240 pounds actually paid or to be paid.
 - (d) The point of shipment.
 - (e) The freight to destination (Egg Harbor City).
 - (f) The cost of cartage to the generating station.
- (2) The kilowatt hours of current generated during the month, by classes of consumption if possible.
- (3) The details of the calculation of the secondary charge for said month.
- (4) No secondary charge may be applied unless and until this information shall have been filed with the secretary of this Board.

This conforms to a conference ruling of the Board in regard to rules to be observed by utilities in respect to a coal clause as a secondary charge to be added to existing rate schedules.

MUNICIPAL STREET LIGHTING RATE IN EGG HARBOR CITY.

By A. C. Goller, Clerk of the City of Egg Harbor, the municipality petitioned the Board for a hearing and investigation of the charges for municipal street lighting service made or to be made to the City of Egg Harbor by the Atlantic County Electric Company. The allegation was made in this petition that the charges in bills rendered to the city by the company appear to be one hundred per cent. more than the company would charge for commercial light. This might or might not be a fair criterion. The company does not furnish, clean and maintain consumers' fixtures and lamps, and the cost of this added service as compared with commercial service where this is not given has not been adequately shown by either party. The proof submitted on behalf of the company with respect to this matter was vague and not of such a nature that the Board, using the testimony of either peti-

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tioner, could come to a conclusion on the record in the case, but, in order to determine the matter, has used data secured by its own staff, supplemented by the exhibits and testimony in the case.

In the table following we will show what appears to be the fair cost of furnishing the municipal street lighting system as now installed in Egg Harbor City:

COST OF FURNISHING STREET LAMP SERVICE.				
<i>Ref.</i>		<i>Total.</i>	<i>Egg Harbor.</i>	<i>Mays Landing.</i>
	Percentage	100.00	53.34	46.66
302-18	Production expense other than coal.....	†\$1,377	\$735	\$642
"	General expense	†439	234	205
"	Taxes	†241	129	112
"	Seven per cent. on present value of capital used for municipal street lighting base, \$13,400 at 7 per cent.....	*938	500	438
"	Depreciation on value new of capital used for municipal street lighting, \$15,300 at 5 per cent.\$.....	*750	400	350
	Operating expense and taxes.....	\$3,745	\$1,998	\$1,747
	Fuel on basis of 1917, 70,371 kw. x 9.13 lbs. is 286.8 tons at \$7.00†.....	2,008	1,071	937
		\$5,753	\$3,069	\$2,684
302-11	Add for maintenance in accordance with P-4 \$677 less \$453.....	222	222	.....
		\$5,975	\$3,291	\$2,684
	Taken at	\$6,000	\$3,300	\$2,700
	*31.6 per cent. of all.			
	†32.0 per cent. of all.			
	†1917 prices.			
	§Only 3 per cent. depreciation has been set aside by company.			

Coal taken at \$7.00 per ton. Adjustment for each month to be made on basis of two-thirds of a mill for each sixteen and one-half cents variation in price of coal from \$7.00 assumed in calculation on basis of 3,130 kilowatt hours per month throughout the year, for Egg Harbor City service.

It would appear to be fair and reasonable for the Atlantic

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County Electric Company to charge the municipality, and for the municipality to pay to the Atlantic County Electric Company, \$3,300 per year, or \$275 per month, for the present installation with coal costing the company, alongside the generating station, \$7.00 per ton, and to make an adjustment of this \$275 on the basis of an addition or a decrease of two-thirds of a mill on each sixteen and one-half cents variation in the price of coal from the said base of \$7.00, the current consumption average for the year being 3,130 kilowatt hours per month throughout the year.

FREE LIGHTS.

In addition to the municipal street lamps, the municipality, in its invitation for proposals, specified that certain lights should be furnished free. In Exhibit P-4 the company shows that the following lights were to have been furnished and are being now furnished free, to wit:

In the pavilion.....	2—100-watt lamps and 18—40-watt lamps.
In the school	36—40-watt lamps.
In the city hall.....	17—40 watt lamps.
In the fire house.....	7—40-watt lamps.
In the jail	1—40-watt lamp.

The above figure of \$3,300 per year does not provide for these so-called free lamps, and these should be properly metered by the company and the bills rendered for the consumption thereon in accordance with the company's commercial lighting schedule as published for other customers.

CONCLUSIONS.

(1) The Board withholds its permission to the company to file its amended coal clause to be applied to commercial metered lighting and power rates, submitted November 3d.

(2) The Board finds that, on the basis of bituminous coal costing \$7.00 per ton, the fair rate for the present system of street lighting as now installed at Egg Harbor City is \$3,300 per year, subject to a monthly adjustment at the rate of two-thirds of a mill per kilowatt hour generated for the municipal street lights (now using 3,130 kilowatt hours per month on the present installation)

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for each sixteen and one-half cents variation in the price of coal per gross ton from said \$7.00.

(3) That the so-called free lights maintained for the city shall be placed on a commercial metered lighting basis and charged in accordance with the schedules for commercial metered lighting.

(4) It is RECOMMENDED that the Atlantic County Electric Company install such additional watt hour meter or meters as will enable it to ascertain the total number of kilowatt hours generated by all its units, that its steam piping shall be properly insulated.

Dated December 18th, 1917.

No. 496.

IN THE MATTER OF THE APPLICATION OF CENTRAL PASSENGER-
RAILWAY COMPANY FOR APPROVAL OF AGREEMENT BE-
TWEEN VENICE PARK COMPANY AND THE CENTRAL PASSEN-
GER RAILWAY COMPANY.

The Venice Park Company purchased at sheriff's sale the property and franchises of the Venice Park Railway Company. Application is made for approval of a lease by the Venice Park Company of this property and franchises to the Central Passenger Railway Company. The Board holds:

1. A franchise cannot be acquired except by legislative sanction. The Board fails to find any statutory authority for the judicial sale of a franchise under a common law execution.

2. The Venice Park Company was incorporated under the General Corporation Act. This act contains no provision authorizing a corporation incorporated thereunder either to acquire or exercise a trolley franchise. Approval is withheld.

L. R. Isenthal, for the Central Passenger Railway Company.

Joseph B. Perskie, for the City of Atlantic City.

The petition of the Central Passenger Railway Company seeks the approval of this Board of an agreement or lease made by the Venice Park Company with the Central Passenger Railway Com-

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pany leasing to the Central Passenger Railway Company its trolley line, comprising rails, poles, wires, cars, franchises and other property formerly owned by the Venice Park Railway Company.

The Central Passenger Railway Company, and also the Venice Park Railway Company, were incorporated under the Street Railway Act, P. L. 1886, page 185; Comp. Stat., Vol. 4, page 4998.

The Central Passenger Railway Company operates a trolley line within the limits of the City of Atlantic City, beginning at the intersection of the boardwalk with the ocean end of Virginia Avenue, thence extending northerly on Virginia Avenue to Adriatic Avenue; thence westwardly on Adriatic Avenue to South Carolina Avenue and thence southwardly on South Carolina Avenue to the intersection thereof with the boardwalk.

The Venice Park Railway Company formerly operated a trolley line also within the limits of the City of Atlantic City in a section commonly known as Venice Park, which line intersected the line of the Central Passenger Railway Company at Adriatic Avenue and at South Carolina Avenue.

It appears that the Venice Park Company, a real estate development company, financed the Venice Park Railway Company and finally reduced the indebtedness of the Venice Park Railway Company to the Venice Park Company to judgment, and purchased at sheriff sale under execution against the Venice Park Railway Company all its property, including rails, poles, wires, cars and other paraphernalia, and equipment and also its franchises.

It also appears that the Venice Park Railway Company was incorporated and constructed its lines and equipment to serve especially that part of the City of Atlantic City known as Venice Park, and that trolley service in that locality is necessary, especially so during the summer months.

Application is made to this Board for the approval of the lease or agreement under section 18, paragraph (h) of the act concerning public utilities (P. L. 1911, p. 374), which provides:

"18. No public utility as herein defined shall (h) without the approval of the Board sell, lease, mortgage, or otherwise dispose of or encumber its property, franchises, privileges or rights, or any part thereof; nor merge or consolidate its property, franchises, privileges or rights, or any part thereof, with that of any other public utility as herein defined. Every sale, lease, mortgage, disposition, encumbrance, merger or consolidation made in violation of any of

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the provisions hereof shall be void and of no effect. Nothing herein contained shall be construed in anywise to prevent the sale, lease or other disposition by any public utility as herein defined of any of its property in the ordinary course of its business."

The question here raised is whether the Venice Park Company can acquire title to a franchise at a judicial sale by virtue of a common law execution and then lease that franchise, together with the physical property, to an operating company.

The Venice Park Company undoubtedly did acquire at the judicial sale the physical property of the Venice Park Railway Company and the physical property, as such, the Venice Park Company has a right to lease. The difficulty here presented is the acquiring and leasing by the Venice Park Company of the franchise of the Venice Park Railway Company, for, unless the franchise passes under the lease, the Central Passenger Railway Company certainly cannot operate over the tracks formerly owned by the Venice Park Railway Company even though it does acquire under the lease the physical property.

A franchise cannot be acquired except by legislative sanction, and even though an individual or corporation acquires the right to the exercise of a public franchise, that right must be the subject of legislative enactment. *McCarter v. Vineland Light, &c., Co.*, 72 N. J. Eq. 767; *affirmed*, 73 N. J. Eq. 703.

Therefore, whether the Venice Park Company acquired in the manner herein indicated, the franchise formerly of the Venice Park Railway Company, is the pertinent inquiry.

An examination of the street railway act, cited *supra*, discloses no authority. A supplement to that act (P. L. 1891, p. 64; Comp. Stat., Vol. 4, p. 5007) provides for a judicial sale of a trolley franchise by virtue of a decree of the Court of Chancery, but does not include judicial sales under common law executions. That supplement does not apply to this case.

Neither is there any authority for the sale of a franchise under a common law execution by virtue of the act respecting executions (Comp. Stat., Vol. 2, page 2243). The Board fails to find any statutory authority for the judicial sale of a franchise under a common law execution and, therefore, concludes that the Venice Park Company did not acquire title to the franchises of the Venice

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Park Railway Company at the judicial sale in question. Having acquired no title to the same, of course, it cannot be the subject of a lease between the Venice Park Company and the Central Passenger Railway Company.

If it is assumed that the Venice Park Company did acquire title to the franchise at the judicial sale under a common law execution, there is still another serious objection to approving the lease.

It is to be noted that the Venice Park Company was incorporated under the General Corporation Act (Revision 1896, Comp. Stat., Vol. 2, p. 1595), and that act contains no provision authorizing a corporation incorporated thereunder either to acquire or exercise a trolley franchise.

In *Fogg v. Ocean City*, 74 N. J. L. (45 Vr.) 362, it appears that the Ocean City Utilization and Sewage Company was incorporated under the General Corporation Act, cited supra, and attempted to lay sewers in the public streets. The Court, at page 366, says

"There is another equally serious objection to the ordinance. The new company is organized under the General Corporation Act of 1896, and while its purpose is undoubtedly lawful within the meaning of the supplement of 1899 (*Pamph. L.*, p. 473) it can have no powers not conferred by the act under which it is organized. That act contains no provision authorizing a corporation organized to lay sewers in the public streets, and the provisions of the certificate of incorporation authorizing it to construct, maintain, and operate a system of sewerage in Ocean City, cannot confer upon it a power not given by the act. The fact that the legislature has provided for the incorporation of sewer companies which desire to construct, maintain, and operate a system of sewerage in the municipalities of this state, and has by that act required a compliance with certain conditions intended to protect the public, is proof that it was not the intent that such a power should exist under the General Corporation Act. The present General Corporation Act is a revision of statutes which existed prior to the passage of the act of 1890. At that time the then existing General Corporation Act, like the present, authorized the incorporation of a company for any lawful business and purpose whatever."

So here the Legislature has indicated by legislative enactment (Street Railway Act; amendments and supplements thereto) the manner in which a franchise may be acquired and exercised, and the fact that these legislative enactments require a compliance with certain conditions intended to protect the public is proof that it was not the intent that such a power should exist under the General Corporation Act.

New Jersey Northern Gas Co.—Approval of Increase in Rates.

For the reasons above stated, this Board withholds its approval of the lease submitted, and will dismiss the petition. An order will so enter.

Dated December 19th, 1917.

ORDER.

This application having been duly heard and the Board having, on the date hereof, made and filed a report containing its findings of fact and conclusions thereon, which said report is hereby referred to and made a part hereof, the Board's approval of this application is withheld and the same is HEREBY DISMISSED.

Dated December 19th, 1917.

No. 497.

IN THE MATTER OF THE APPLICATION OF THE NEW JERSEY
NORTHERN GAS COMPANY FOR APPROVAL OF INCREASE IN
RATES.—REHEARING.

Application is made for approval of an increase in rates. The Board holds:

1. The company is entitled, under the war conditions now existing, to a schedule of rates which will provide an increased revenue during the present period of high costs.
2. The schedule which should be applicable to domestic consumers using less than 10,000 cubic feet per month should provide for payment by each connected customer of a readiness to serve charge of 25 cents per month without gas and the payment of \$1.55 net per thousand cubic feet for gas actually consumed.
3. The foregoing rates to be made effective by the company under the express condition that they shall be subject to revision when conditions as to cost of labor and material shall return to substantially those existing in 1916.

Norman Grey and J. A. Riggins, for the petitioner.

A. D. Oliphant, for the Borough of Pennington.

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G. A. Malloy, for the City of Lambertville.

George H. Large, for the Borough of Stockton, Chamber of Commerce of Flemington, Housewives' League of Flemington, and Consumers' League of Flemington.

Under date of June 25th, 1917, the New Jersey Northern Gas Company filed a petition with the Board, citing the history of the company and stating that the rates in the territory supplied by it had been reduced at the time the company was formed by consolidation of the Flemington and Lambertville Gas Light companies and that a further reduction had been made on January 1st, 1915, this providing for a rate of \$1.60 gross, less 10c. per thousand cubic feet, discount for prompt payment.

A rate schedule was submitted in the original petition which proposed to affect only the domestic consumers paying the present base rate of \$1.60, less 10c. for prompt payment, and provided for a fixed monthly "service charge" of 50 cents per month per consumer and a reduction in the price of gas to \$1.40 per thousand cubic feet, net.

The matter was heard July 6th, 1917, by this Board, and, under date of August 14th, 1917, the Board concluded, from the testimony submitted, that it seemed evident that if the high cost of manufacturing gas continued, additional revenue would be needed. The testimony, however, failed to indicate how much additional revenue would result from the proposed tariff and the Board was, therefore, unable to conclude that the tariff would be fair and reasonable to all classes of consumers; nor was there satisfactory proof that the proposed service charge bore a proper relation to the cost of readiness to serve. For these reasons the Board withheld approval of the proposed schedule.

Under date of September 8th, 1917, the company submitted a second petition for further hearing of the matter, alleging that "the labor conditions with the petitioner are worse than they were at the date of said hearing" and the "petitioner has been obliged to increase the salaries of the gas makers and fitters * * *"; further that the petitioner alleges that it is prepared to furnish proof on the matters as set forth in the conclusion of the Board above.

New Jersey Northern Gas Co.—Approval of Increase in Rates.

**CAPITAL USED AND USEFUL, AND RATE OF RETURN THEREON, AS
ASSUMED BY THE COMPANY.**

The company did not submit an inventory and appraisal of its property in the usual form, but did submit certain exhibits, numbered P-1 R.H., P-2 R.H., and P-3 R.H.

In lieu of such an inventory and appraisal, the company, on page 5 of its Exhibit P-1 R.H., submitted a table showing its issue of bonds, the net proceeds therefrom and the amount of stock issued at par, which securities were issued under the authority of this Board. It does not necessarily follow, however, that a valuation made ex parte for the purpose of approving an issue of securities would be conclusive for purposes of developing a schedule of rates. For the purposes of this report, however, the difference will not be such as to affect the validity of the conclusion which may be arrived at.

Table A, following, shows the principal facts with respect to the issues of bonds and stock on the basis assumed by the company, arranged so as to show the annual cost of capital for interest and annual amortization of bond discount based on the number of years the bonds were run.

TABLE A.

**CAPITAL, WITH INTEREST AND DEPRECIATION THEREON, ON BASIS OF SECURITIES
ISSUED (AS PROPOSED IN EXHIBIT P-1, P. 5).**

	Bonds.	Bonds.	Bonds.	Total Bonds.	Stock.	Grand Total.
1. Par value of issue.....	\$15,000 00	\$45,250 00	\$196,250 00	\$256,500 00	\$75,000 00	\$331,500 00
2. Total discount allowed.....		4,525 00	39,250 00	43,775 00		43,775 00
3. Cash proceeds.....	15,000 00	40,725 00	157,000 00	212,725 00	75,000 00	*287,725 00
4. Interest rate on (1).....	5%	5%	5%	5%	6%	
5. Interest annually.....	750 00	2,262 50	9,812 50	12,825 00	4,500 00	17,325 00
6. Bond discount, annual amortization.....		113 12	981 25	1,094 37		1,094 37
7. Annual interest and discount.....	750 00	2,375 62	10,793 75	13,919 37	4,500 00	18,419 37
8. (7) is per cent. of (3).....	5%	5.83%	6.88%	6.54%		6.4%
9. For depreciation being 7% on (3) less (7).....	300 00	475 13	196 25	971 38	750 00	1,721 38
10. Total 7% on 3.....	1,050 00	2,850 75	10,990 00	14,890 75	5,250 00	20,140 75

* Erroneously footed in Ex. P-1, p. 5.

New Jersey Northern Gas Co.—Approval of Increase in Rates.

From this it will be seen that the company adopts as the basis for capital used and useful, \$287,725 (improperly stated as \$277,725 in the exhibit referred to) and assumed a rate of 7 per cent. interest on this amount for the purposes of paying a return on the capital and for providing a reserve for depreciation. This capital is used and useful for serving, not only the domestic consumers affected by this petition, but also the wholesale customers and the municipal street lamp service. The testimony does not cover a schedule for all these classes of consumers so that it was necessary to make calculations based on the material shown in Exhibit P-1 R.H. to ascertain how much of the gas sold should be apportioned to the consumers affected by this petition. This shows a list of consumers, classified by average consumption, together with such average consumption for each class and the total arranged by first, second, third, fourth and fifth thousand cubic feet of gas consumed. This is shown in the following Table B, the total number of consumers, 1,807, using 21,051,000 cubic feet of gas. This is approximately 80 per cent. of the total gas sales.

TABLE B.

DERIVED FROM DATA IN EXHIBIT P-1, PP. 7 AND 11.

No. of Consumers.	Average Cu. Ft. per Customer.	First M. Cu. Ft. per Month. Total M. Cu. Ft.	Second M. Cu. Ft. per Month. M Cu. Ft.	Third M. Cu. Ft. per Month. M. Cu. Ft.	Fourth M. Cu. Ft. per Month. M. Cu. Ft.	Fifth M. Cu. Ft. per Month. M. Cu. Ft.	Total for Retail Customers per Month.
398	300	119,400	.....	.....	.....	.....	119,400
589	500	294,500	.....	.....	.....	.....	294,500
987	.....	413,900	.....	.....	.....	.....	413,900
402	950	381,000	.....	.....	.....	.....	381,000
219	1,500	219,000	100,500	.....	.....	.....	328,500
93	2,150	93,000	93,000	13,950	.....	.....	199,950
80	3,750	80,000	80,000	80,000	60,000	.....	300,000
26	5,000	26,000	26,000	26,000	26,000	26,000	130,000
820	.....	790,900	308,500	119,950	86,000	26,000	1,320,350
1807	Per month	1,213,800	308,500	119,950	86,000	26,000	1,754,250
.....	X 12	14,565,600	3,702,000	1,439,400	1,032,000	312,000	*21,051,000

* About 80% of all gas sales.

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OPERATING RESULTS UNDER PRESENT SCHEDULE, 1914, 1915, 1916.

On the basis of capital return shown above, Exhibit C-1 was submitted by Mr. Perry of the Board's staff, showing that the total expenses and taxes for 1914 for all classes of consumption was \$1.1057; for 1915, \$0.9866; for 1916, \$0.937; for the first seven months of 1916, \$0.9543; and for the first seven months of 1917, \$1.1731. Assuming 7 per cent. on the cash proceeds of bond and stock issues, there was an operating deficit in 1914 of 58.71 cents; in 1915, 43.98 cents; in 1916, 37.44 cents, so if stock be excluded from the calculation, the deficit in 1914 would be 27.95 cents; 1915, 19.53 cents; 1916, 13.08 cents. If this ratio were continued during 1917 and 1918, it would decrease. On the second basis there would be no deficit in 1918, but a slight profit with respect to stock. With respect to the war conditions, alleged to have caused the expenses to have materially increased, an analysis of the evidence shows that the following increases may be expected in the operating expenses during 1918, when the proposed rate shall be operative.

TABLE C.

	<i>Pounds per M. cu. ft.</i>	<i>Cost per M. cu. ft. 1916.</i>	<i>Cost per M. cu. ft. 1918.</i>	<i>Indicated Increases.</i>
Boiler	53.39	9.26c.	16.15c.	6.89c.
Generator fuel	62.81	14.65c.	17.50c.	2.85c.
Gas oil	4.73	15.09c.	33.12c.	18.03c.
Production expense .....	.....	39.00c.	66.77c.	27.77c.
Distribution expense about..	.....	4.62c.	6.83c.	2.21c.
Total .....	.....	43.62c.	73.60c.	29.98c.
Taken at .....	.....	.....	.....	30.00c.

Table C shows that the increases indicated by the testimony will amount to about 30 cents. The addition of this 30 cents to the base rate of \$1.50 now in effect would indicate an average rate of \$1.80 to compensate for these increases. It is to be noted that substantially all of this increase of 30 cents would apply to all gas sales, whether of the domestic customers affected by this peti-

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tion, or wholesale and municipal customers. As shown above in Table B, the consumption of the domestic customers approximate 21,051,000, the total sales being estimated at 25,850,000 cubic feet for the entire year. The increase shown with respect to the domestic consumption would be $21,051,000 \times 30$ cents, or \$6,315.30 per year for the entire year.

FORM OF THE RATE SCHEDULE.

The total amount to be derived from the sales to domestic customers using 21,051,000 annually at \$1.80 would be approximately \$38,000. So far as the company's finances are concerned, it is immaterial whether this total amount is raised by a uniform rate without a minimum, or a uniform rate for a smaller rate per thousand with a minimum, or a still smaller rate per thousand and a service charge of 50 cents as asked for in the petition, or a smaller service charge of 25 cents with an increased cost per thousand cubic feet of gas.

MINIMUM CHARGE.

The objectors object very much to a service charge of 50 cents per month for connected customers in the domestic class. In their brief, page 4, they ask the Commission "to make a minimum charge sufficient to save the company harmless on its investment. That is the only fair way out of such a situation. The petitioner seems to recognize the equity of this contention." The minimum of 50 cents per month per customer, however, is inadequate to meet the existing conditions. It would produce, at most, a revenue of 5 cents per month or 60 cents per year from each of the 398 customers using an average of 300 cubic feet of gas shown in Table B. This would aggregate only \$240 per annum and would afford but little relief.

On the assumptions hereinbefore made, a minimum rate of \$1.00 per month would require the following schedule:

- For the first 500 cubic feet or any part thereof, \$1.00.
- For the next 1,500 cubic feet at rate of \$1.70 per M. cu. ft.
- For excess over 2,000 cubic feet at rate of \$1.60 per M. cu. ft.

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We have assumed that 200 customers would cease taking gas rather than pay the minimum rate of \$1.00.

SERVICE CHARGE.

It has not been the general custom of gas companies heretofore to analyze the manner in which their costs accrue. Such studies have been made with more exactness and detail by electric light companies which cannot store their product; they have been gradually compelled, therefore, to devise rate schedules which will make their revenues accrue somewhat in accordance with the way that their costs accrue. It will be recognized by those who study the subject that public utility companies may be divided into two classes. *First—Those which furnish a service only.* As illustrations of this class we will mention (1) the express companies which transport goods only; (2) railroads which transport freight and passengers; (3) telegraph companies which transmit the written message; and (4) the telephone companies which transmit the spoken word. Under the second general class may be noted *companies which furnish both the service of transporting the product to the consumer and a product manufactured by them.* As instances of utilities of this class we may cite (1) electric companies which serve energy that may be converted into light, heat or power; (2) water companies which serve water that may be used for domestic and manufacturing purposes and for fire protection, or, in rare instances, for power and irrigation; (3) gas companies which serve gas that may be used for illumination, heat and power.

It is evident that the first general class of companies furnish *nothing* but service and that their entire bill is for *service without any product*. The second class furnishes both service and a *product which can be used*. If an analysis should be made the cost of this service could be segregated, in a measure, from the cost of the product, the service cost being substantially that which would arise from a plant ready to deliver its product, but delivering none. For the purposes of this investigation we will content ourselves with deriving a service charge based entirely on the property

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devoted to the individual consumer, and located almost entirely on his premises.

By reference to the annual reports of this company for the year ending 1916, we find that

1,966 services cost	\$35,036 or \$17.53 each.
1,807 meter installations cost.....	3,575 or 1.98 each.
Subtotal	\$38,611 or \$19.51 each.
1,943 meters cost	\$16,258 or \$8.37 each.
Average cost per customer.....	\$27.88
Overhead cost (Accs. 127 and 132, say 6 per cent.).....	1.67
Total cost per customer, all sizes.....	\$29.55
We have hereinbefore computed the cost for interest on bonds (net proceeds)	6.55%
For depreciation on service and meter (33-year life).....	3.00%
Taxes	0.75%
Total	10.30%

To pay for interest, depreciation and taxes on the \$29.55 it would cost, per customer, then, \$3.04 per year. For work on consumers' premises, maintenance of meter and service, based on 1915 and 1916 annual reports, it would cost per customer 35 cents per year, a total for large and small customers of \$3.39. For the domestic customers, however, we will take the cost at \$3.00 per year, or 25 cents per month. This would yield in a year for 1,807 customers, as shown in Exhibit P-1, \$5,421, to be derived from such a service charge. Deducting this from the total revenue of \$38,000 to be derived by the company from the sale of 21,051,000 cubic feet of gas would leave \$32,579 to be produced by the sale of gas only. This would indicate a rate of \$1.55 per thousand, net. On this basis, then, the company would charge 25 cents per month for each connected customer without gas and would receive \$1.55 net per thousand cubic feet for gas sold in addition thereto.

It is the Board's opinion that the latter form of rate, under the state of facts revealed by the record, will provide a more equitable schedule of rates, will cause fewer customers to discontinue use of

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gas, and, at the same time provide the company with a revenue with respect to domestic customers affected by this investigation, which will be adequate to provide for the increases in the cost of operation incident to war conditions existing at this time. It is to be understood, however, that the increases granted are to meet these temporary conditions and the adjustment of rates made at this time is with the expressed understanding on the part of the Board and of the company that they shall be subject to revision at such time as costs shall return to substantially those prevailing in 1916.

The objectors complained that the company has not rendered and is not now rendering proper service. This is a proper subject for investigation, but not in connection with the present application with respect to rates; the rate schedule prescribed has been developed on the theory that the company must at all times give "safe, adequate and proper service."

After full consideration of all the facts, the Board concludes and finds:

(1) That the company is entitled, under the war conditions now existing, to a schedule of rates which will provide an increased revenue during the present period of high costs;

(2) That the schedule of rates applicable to domestic customers using less than 10,000 cubic feet per month which will provide this revenue should be as follows: Each connected customer shall pay a "readiness to serve" charge of 25 cents per month without gas. For all gas consumed, he shall pay \$1.55 net per thousand cubic feet for gas actually consumed;

(3) This increase in revenue is to be accepted by the company under the express condition that the above schedule of rates shall be subject to revision when conditions as to cost of labor and material shall return to substantially those existing in the year 1916.

The Board will permit the filing of a rate schedule consistent with the conclusions announced herein.

Dated December 19th, 1917.

Tuckerton Water Co.—Permission to Increase Minimum Charge.

No. 498.**IN THE MATTER OF THE APPLICATION OF THE JAMESBURG WATER COMPANY FOR PERMISSION TO INCREASE MINIMUM CHARGE.**

Merritt W. Pharo, for the company.

Application is made for permission to increase the minimum charge of the company by adding thereto the sum of \$1.00, heretofore charged as meter rental. Under the Board's rule meter rentals are not permitted. The company now imposes a minimum charge of \$12.00 per annum, which is sought to be increased to \$13.00 per annum. Under the proofs we are not satisfied that the present charge is not sufficient. The application is denied.

Dated December 28th, 1917.

No. 499.**IN THE MATTER OF THE APPLICATION OF TUCKERTON WATER COMPANY FOR PERMISSION TO INCREASE MINIMUM CHARGE.**

Merritt W. Pharo, for the company.

Application is made for permission to increase the minimum charge of the company by adding thereto the sum of \$1.00, heretofore charged as meter rental. Under the Board's rule meter rentals are not permitted. The company now imposes a minimum charge of \$11.00 per annum, which is sought to be increased to \$12.00 per annum. Under the proofs we are not satisfied that the present charge is not sufficient. The application is denied.

Dated December 28th, 1917.

Toms River Electric Co.—Approval of Capital Stock Issue.

No. 500.

IN THE MATTER OF THE APPLICATION OF THE TOMS RIVER ELECTRIC COMPANY FOR APPROVAL OF AN ISSUE OF TEN THOUSAND DOLLARS (\$10,000) CAPITAL STOCK FOR TREASURY USE AND TWENTY THOUSAND DOLLARS (\$20,000) OF ITS CAPITAL STOCK TO BE ISSUED AS A STOCK DIVIDEND.

1. Stock dividends should be based upon the actual cost of the property without any allowance for intangible values, decreased by accrued depreciation.

2. A utility should have part of its property represented by free surplus. The Board deducts for this purpose 15 per cent. from a valuation of \$44,910, leaving \$38,000 to be represented by capital stock, of which a par value of \$23,000 has been approved heretofore.

3. Permission is given to issue \$15,000 additional stock, of which \$8,000 may be used in payment of a stock dividend.

David A. Veeder, for the petitioner.

On October 22d, 1917, the Toms River Electric Company filed a petition asking "for authority to issue a stock dividend of twenty thousand dollars (\$20,000.00) to its stockholders, and authority to increase the issue of three thousand dollars' (\$3,000.00) worth of stock authorized by this Board on July 11th, 1916, to ten thousand dollars (\$10,000.00) for the payment of said notes amounting to ninety-seven hundred dollars (\$9,700.00) and the balance of said issue to be used as working capital."

This petition was heard on December 19th, 1917. The company called as witnesses George H. Holman, secretary of the company from 1901 to 1905, and C. A. Brant, its present president. These two witnesses submitted several exhibits in support of the company's contention that the present value of its property, that is, its book cost less accrued depreciation, is approximately fifty-three thousand dollars (\$53,000.00). Mr. Holman testified to the approximate amount of money which had been spent for capital purposes during the time of his secretaryship. There was no positive evidence covering the period from 1905 to 1912.

The Exhibit P-2 is a statement of fixed capital installed between

Toms River Electric Co.—Approval of Capital Stock Issue.

January 1st, 1913, and December 31st, 1916; the amount of fixed capital covered by this exhibit is \$11,720.90, from which is deducted only one year's accrued depreciation amounting to \$410.92, instead of the depreciation for the term covered by the exhibit.

The Exhibit P-3 is a statement of fixed capital installed between January 1st, 1916, and November 1st, 1917; the book cost of the fixed capital installed in 1916 is shown to be \$6,439.83, and the fixed capital installed in 1917 up to November 1st is stated to be \$3,543.11, from which is deducted only one year's depreciation.

It is to be noted that these two exhibits overlap to the extent of \$6,439.83, the amount of capital installed in 1916, and the depreciation shown on each exhibit is for one year only, although the capital installed covers a period of more than one year.

The burden of proof in the matter of this application is imposed on the petitioner, but the evidence submitted is not at all conclusive, either as to the years covered by actual exhibits, or as to the interval elapsing between 1905 and December 31st, 1912. Instead of following this line of proof then, we shall consider the valuation made by the appraisal department of the Board, as of December 31st, 1916, which was submitted in evidence.

In the opinion of the Board stock dividends should be based upon the actual cost of the property installed without any allowance for intangible values, decreased by accrued depreciation. In Account No. 1, sheet No. 1 of the appraisal referred to, we shall therefore take as the book cost of the fixed capital of the Toms River Electric Company on December 31st, 1916, the total of \$52,271.00. From this amount we deduct the accrued depreciation of 25.5 per cent. as of December 31st, 1916, to which we add 4.5 per cent. accruing during the year 1917, making a total accrued depreciation of 30 per cent., or \$15,681.00; this accrued depreciation of \$15,681.00, deducted from the estimated book value new of the property, installed as of December 31st, 1916, would leave the present value thereof on December 31st, 1917, \$36,590.00. To this should be added the additions during 1917 (as shown on Exhibit P-3) of \$3,543.00, making a total present value of the fixed capital of the petitioner on December 31st,

Toms River Electric Co.—Approval of Capital Stock Issue.

1917, as estimated, of \$40,133.00. To this we add on the basis of the past four years' average for materials and supplies, \$1,225.00, cash \$1,070.00, accounts receivable \$2,965.00, or a total for current assets of \$5,260.00; this, added to the fixed capital of \$40,133.00, makes a total of \$45,393.00, as the total present value as of December 31st, 1917, of the property of the petitioner after deducting all overhead allowances and accrued depreciation.

As another criterion of the value of the property, we shall refer to the annual report filed with this Board by the petitioner, for the year 1916. The plant and equipment of the property as shown therein (and as further set forth on page 3 of the petition) amounted to \$40,795.90. Representatives of the Board have been informed that the item of \$29,075.00, book value of properties installed prior to January 1st, 1913, was the result of an appraisal of the property of the company made by its own representatives as of December 31st, 1912, depreciated at the rate of approximately 2 per cent. per annum for the years of 1913, 1914, 1915 and 1916.

Investigations made by the engineering staff of the Board, however, indicate that the depreciation should be estimated at $4\frac{1}{2}$ per cent. per annum to maintain the property at 100 per cent., so that the amount of \$29,075.00 is in excess of the present value by approximately 10 per cent., or \$2,907.50, even though \$29,075 is taken as the value new on January 1st, 1913. The property installed since December 31st, 1912, aggregating \$15,264.00 book cost, should likewise be depreciated, at approximately 5 per cent. per annum, or 15 per cent. on the total, which we shall take at \$2,250.00, or a total accrued depreciation of \$5,150.00. The book value of the fixed capital, as of December 31st, 1917, arrived at in this manner, then, would be \$40,795.90 on December 31st, 1916, plus \$3,543.11, installed during 1917, as shown on Exhibit P-3, a total value new of \$44,339.00. Deducting from this sum \$5,150.00, estimated accrued depreciation, would leave \$39,189.00.

In the analyses above given, as of December 31st, 1917, we have the two values for fixed capital of \$40,133.00, and \$39,189.00, the average of which may be taken at \$39,650.00. Adding current assets of \$5,260.00, would indicate an average value of \$44,910.00.

In the present period of stress, a utility may have sudden de-

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mands on its resources, and it is the Board's opinion that the company should have a certain amount of its property represented by free surplus. In the instant case the Board deducts for this purpose 15 per cent., which will leave approximately \$38,000.00, which may be represented by capital stock.

The company has heretofore issued \$20,000.00 of its capital stock, and as before mentioned, received the permission of this Board on July 11th, 1916, to issue \$3,000.00 of its capital stock. The Board, therefore, will grant permission to the company to issue an additional amount of \$15,000.00 of its capital stock, of which \$7,000.00, together with the \$3,000.00 heretofore authorized to be issued, shall be used to liquidate the accounts payable, and bills payable, aggregating \$9,700.00, \$300.00 to be used for working capital, and \$8,000.00 to be used in payment of a stock dividend, in accordance with terms of the petition.

A certificate will so issue.

Dated January 2d, 1918.

No. 501.

IN THE MATTER OF COMPLAINT OF THE BOROUGH OF HASBROUCK
HEIGHTS V. ERIE RAILROAD COMPANY, AND NEW YORK AND
NEW JERSEY RAILROAD COMPANY, IN THE MATTER OF STA-
TION FACILITIES AT WILLIAMS AVENUE, HASBROUCK
HEIGHTS.

Complaint is made that an old passenger car is being used as a passenger station where heretofore until destroyed by fire a station building was maintained. The Board is asked to order the railroad company to build a station. A cross petition is filed asking approval of the discontinuance of the station as an agency station. *Held:*

1. Old, discarded cars do not afford, under ordinary circumstances, proper station facilities.

2. Under normal conditions the company would be ordered to construct a suitable building. An order requiring this will be deferred until conditions become more nearly normal.

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3. The fact that an agent is not necessary throughout the day is not sufficient cause for discontinuance of an agency station where travel is heavy in the morning and a station lighted, clean, and comfortably heated is needed for the accommodation of such travel.

Walter G. Winne, for the petitioner.

G. A. W. Achenbach, for the respondents.

L. Edward Herrmann, for the Commission.

The Borough of Hasbrouck Heights filed a petition alleging that about the 10th day of July, 1916, the railroad station of the Erie Railroad Company located at Williams Avenue in Hasbrouck Heights, New Jersey, was destroyed by fire; that after the fire the railroad company for a long time used an old discarded freight car as a temporary station; that this was subsequently replaced by an old style passenger coach; that no station is provided at Williams Avenue in said borough at the present time, except the old style passenger coach aforesaid; that for a long time prior to said fire a proper station furnishing safe, adequate and proper service to the people of Hasbrouck Heights was maintained at Williams Avenue; that the station facilities as provided by said railroad company are unsafe, inadequate and improper. It was asked that an order be made commanding said railroad company forthwith to erect a proper and adequate station in place of the aforesaid passenger coach. No answer was filed by the Erie Railroad Company to the petition.

A hearing was held in the matter by the Commission on October 17th, at which hearing the petitioner and the respondent appeared. Upon the suggestion of counsel for the respondent that the Erie Railroad Company, the respondent, is not operating the railroad, but that the same is owned and operated by the New York and New Jersey Railroad Company, and with the consent of the said New York and New Jersey Railroad Company, the petition was amended, adding the New York and New Jersey Railroad Company as a respondent.

Counsel for the respondent, New York and New Jersey Railroad Company, requested leave to file an answer alleging that the

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station facilities maintained at Williams Avenue, Hasbrouck Heights, are adequate for the inhabitants of said borough; that the respondent's financial condition will not permit the erection or improvement of the Williams Avenue station at the present time, and praying that the petition be dismissed; and by way of cross-petition, prayed for the approval of this Board of the discontinuance of Williams Avenue as an agency station.

Since said hearing an answer and cross-petition have been filed, under the leave granted, by the respondent New York and New Jersey Railroad Company, containing these allegations, and prayer for relief. Witnesses were produced by the petitioner and the respondent New York and New Jersey Railroad Company.

Hasbrouck Heights is a borough with a population of between two thousand five hundred and three thousand people, situated between Woodbridge and Hackensack. Two stations are maintained by the respondent New York and New Jersey Railroad Company, in said borough, one at Williams Avenue and the other at or near Franklin Street, known as "The Hasbrouck Heights Station." That portion of the borough served by the Hasbrouck Heights Station is more populous than the portion served by the Williams Avenue Station. The section served by the Williams Avenue Station indicates more new development.

In 1903 the Williams Land and Building Company, presumably the owner of lands served by the Williams Avenue Station, entered into an agreement with the respondent New York and New Jersey Railroad Company, agreeing to convey to the said New York and New Jersey Railroad Company, by full covenant warranty deed a tract of land adjoining the right of way of said railroad company one hundred (100) feet wide and two hundred (200) feet long, and the said railroad company agreed to construct, equip and maintain a station building thereon at a cost not to exceed twelve hundred dollars (\$1,200), and to employ an agent who should remain at duty at said station during such hours of the day as in the opinion of the division superintendent of the said railroad company were necessary to accommodate the business of said station. Said railroad company further agreed to make said station a regular stopping place for at least nine trains each day on week-days and five trains on Sundays, reserving the right to

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cease the running of any of said trains whenever the said New York and New Jersey Railroad Company deemed it advisable so to do. The agreement further provided, as follows:

"The intention being to furnish said station with as good train service as is furnished to similar stations located on the New York and New Jersey Railroad."

A deed was subsequently made by the said land and building company to the said railroad company, conveying the premises agreed to be conveyed in fee simple by full covenant warranty deed. The station building, however, was not erected by the railroad company, but was erected by Williams Land and Building Company, and was maintained as an agency station until July 10th, 1916, when the said building was destroyed by fire; after its destruction by fire, the railroad company placed and used as a station on the land formerly occupied by the station a freight car; shortly thereafter, however, this was replaced by the present passenger coach which has been set off its truck. The seats have been removed and a partition erected therein, making an office 13 feet long by 5 feet wide; and a waiting room 26 feet 10 inches long and 9 feet 10 inches wide. Benches have been erected along the side of the coach, one sixteen feet long, and the other thirteen feet long. Stoves were placed in both the office portion of the car and the waiting room portion; wire netting was placed outside of each of the windows to protect the same. A young woman was engaged as agent. The petitioner alleges that the station facilities thus provided are unsafe, inadequate and improper, and asks that an order may be made commanding the respondent to erect a proper and adequate station instead of and in place of the said passenger coach.

The Williams Avenue Station is six-tenths of a mile from the Hasbrouck Heights Station, and the next station to the north of Williams Avenue Station is Woodbridge Station, one and one-tenth miles distant, in the Borough of Woodbridge.

The facilities afforded in the Hasbrouck Heights Station are two waiting rooms 12 x 16 feet, an office 8 x 10 feet, waiting room 4 x 10 feet, a baggage room 8 x 10 feet, toilet facilities, and the necessary platform entrance to the freight house, and is an agency operated station.

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From all of the testimony the following facts may be fairly ad-duced; that ninety per cent. of the patrons of the railroad company using Williams Avenue Station are commuters. The number of commuters using this station is about sixty-five; the majority of them patronize the two trains operated by the respondent leaving Williams Avenue Station between seven and eight o'clock. The station agent did not come on duty at the station until about ten or ten-thirty o'clock in the morning. The commuters thus had difficulty in procuring commutation tickets, and by some arrangement with this agent, commutation tickets were delivered at their homes. When there was delay in receiving commutation tickets, or when passengers desired to purchase tickets, there being no agent in charge, the passengers were obliged to pay the one way fare. No excess fare, however, is charged by the conductor on the trains.

All of the testimony of the witnesses for the petitioner is in accord as to the cleanliness and comfort provided at the station; they say that the station is not clean, and that no heat is provided when the station is used early in the morning; in fact, some of the witnesses for the petitioner testified to being obliged to start fires in the stoves provided in the waiting room while waiting for trains to arrive. These matters, however, are clearly matters of supervision.

We are not able to agree with the contention of the company that old, discarded cars afford, under ordinary circumstances, proper station facilities. If the company was not required by war conditions to strain every nerve to meet the demands made upon it, and if it were not necessary, in the broad public interest, to conserve its resources, we should make an order requiring the construction of a suitable building. In the circumstances, however, we will defer ordering a new station until conditions become more nearly normal.

The Board is not satisfied that the respondent has shown any justification for the discontinuance of this station as an agency station, which is the relief it seeks under its cross petition. It may not be necessary to have an agent on duty during the entire day, but for the convenience of the residents of Hasbrouck Heights it is necessary, in the opinion of the Board, that the agent be in

Morris County Traction Co.—Approval of Trackage Agreement.

charge of the station when the travel is heaviest, particularly in the morning, for the sale of tickets to the commuters. The station should also be maintained comfortably by having the fires lighted in the stoves during the winter months, and be kept clean.

There is no evidence to show that the amount of travel from this station is less than it was when the station was first erected. On the contrary it appears that that part of Hasbrouck Heights is a growing community, and that the travel from this station is increasing, rather than decreasing. The Board is therefore of the opinion that the cross petition filed in this cause should be dismissed.

The petition of the borough will be dismissed, with leave to renew when conditions become more nearly normal.

Dated January 15th, 1918.

No. 502.

IN THE MATTER OF THE APPLICATION OF THE MORRIS COUNTY
TRACTION COMPANY FOR APPROVAL OF A TRackage AGREEMENT,
DATED OCTOBER 2D, 1913, BETWEEN THE MORRIS
RAILROAD COMPANY AND THE MORRIS COUNTY TRACTION
COMPANY.

An electric railway is owned and operated by the Morris County Traction Company. A comparatively short part of the continuous route was constructed and is owned by the Morris Railroad Company. Application is made for approval of a trackage agreement, providing for the operation over the Morris Railroad Company of cars of the Morris Traction Company. *Held:*

1. When the traction company is to be credited with all revenues from operation, it should bear directly all operating expenses. The rental therefore should not include operating expenses of the railroad company.

2. The two roads being practically one cannot be regarded as two separate and distinct properties. A trackage agreement providing for payment to the railroad company of a disproportionate share of the earnings of the whole line should not be approved.

King & Vogt, for the petitioner.

Morris County Traction Co.—Approval of Trackage Agreement.

The Morris County Traction Company was organized in 1899, under the "Traction Act," for the purpose of constructing and operating an interurban electric railway between the City of Elizabeth in Union County and Lake Hopatcong in Morris County. With the exception of 2.69 miles between the Borough of Madison and the Town of Morristown, both in Morris County, the entire main line of the traction company was constructed in its own name, but because the necessary rights of way could not be obtained under the "Traction Act" the company was unable to complete its line between the aforesaid points.

The Morris Railroad Company was organized in 1911, under the "General Railroad Act," for the purpose of constructing the 2.69 miles of railway between the Borough of Madison and the Town of Morristown which the traction company in its own name was unable to build. Both companies have the same directors and officers and practically all holders of the bonds or stock of the railroad company are also stockholders or bondholders of the traction company.

Upon the completion of the line of the Morris Railroad Company the operation thereof was immediately commenced by the traction company as a part of its system under a lease or so-called trackage agreement dated October 2d, 1913, and for several years thereafter the road has thus been operated, although the said lease or agreement has never been approved by this Board, as would clearly seem to be required by paragraph 18 (*h*) of the "Public Utilities Act," Chapter 195, Laws of 1911. This fact was brought out at the hearing on November 27th, 1917, in the matter of the application of the Morris County Traction Company for the approval of an issue of income debenture bonds, at which time said company was advised that as a part of that proceeding an application should be made for the Board's approval of the said lease or trackage agreement. This was done under date of December 5th, 1917.

By the terms of the present lease or trackage agreement the traction company is given the right to operate its cars over the tracks of the railroad company, the former bearing all but a few specified expenses incurred in the operation thereof and also assuming the entire liability for the payment of all taxes levied

Morris County Traction Co.—Approval of Trackage Agreement.

against the property of the railroad company. In addition to this the traction company also agrees to pay as rental a sum which for the first year amounted to \$23,972.50 and which diminishes \$200 each year thereafter until all outstanding bonds of the railroad company have been retired. This amount enables the latter to pay 6 per cent. dividends on its capital stock after paying 5 per cent. interest on all outstanding funded debt and after providing a sinking fund sufficient to retire all the bonds during the life thereof, in addition to meeting certain items of expenses to be borne directly by the railroad company and not by the traction company, although these expenses pertain almost entirely to the operation of the road. By including them under the head of rent deductions the traction company is not showing under the proper accounts on its books all the expenses of operating its entire line, whereas it does include in its operating revenues all fares collected on any portion thereof. In the Board's opinion all expenses of operation should be borne directly by the traction company, if that company is to be credited with the entire amount of operating revenue as would clearly appear to be altogether proper, inasmuch as it would practically be impossible to determine what proportion of the gross operating revenues are properly assignable to the railway property for the reason that the latter can be operated only as a part of the traction company's line, and hence if for no other reason than the inclusion of operating expenses as a part of the rental, the Board would not be inclined to approve the said lease or trackage agreement in its present form.

The amount of the rental after eliminating the allowance to cover items of expense is not quite 8 per cent. of the cost of the road, which in round figures is \$250,000. The money to build this road was practically all obtained from the proceeds of bonds and stock issued under the authority granted by this Board, and hence the cost as just stated may be regarded as fairly representing the amount on which the company is entitled to a just and reasonable return. Under normal circumstances a return of 8 per cent. could perhaps not be held to be unduly high or unreasonable, and if this were the average rate of return on the entire investment in the whole line operated by the traction company, there could then possibly be no objection to paying out as rental 8 per

Morris County Traction Co.—Approval of Trackage Agreement.

cent. of the cost of the railroad company's property. In no year thus far have the traction company's net earnings, however, equaled 3 per cent. of the amount of its outstanding funded debt, which may be assumed to represent the actual investment in its own line inasmuch as it is equivalent to approximately the same average per mile of road as that of the railroad company. As a justification for the latter receiving a higher rate of return on its investment than that enjoyed by the traction company, testimony was submitted indicating that the number of passengers per mile carried over the railroad was considerably higher than the average number of passengers per mile transported over the entire line operated by the traction company, but it is also very likely the case that there are other portions of the line where the travel is equally as great as it is over the mileage owned by the railroad company.

As appears from the above-stated facts, the two roads are practically one and cannot very well be regarded as two separate and distinct properties. If the traction company had been able of itself to acquire the right of way, as it tried to do, the railroad company would never have been organized, and the traction company would undoubtedly have issued an additional amount of its own securities for the purpose of building this portion of the line it now operates, all of which very probably would have been purchased by the present holders of the securities of the railroad company inasmuch as practically every one of the latter also owns bonds or stock of the traction company. Accordingly it would clearly appear that the construction of the two roads, as well as the operation thereof, should, so far as possible, be regarded as a single enterprise.

In the Board's report of December 18th, 1917, on the application of the Morris County Traction Company for authority to issue income debenture bonds, reference is made to a certain deed of trust or agreement dated June 18th, 1917, made by and between the company's first and second mortgage bondholders, whereby such of the first mortgage bondholders as are parties to the agreement, which includes more than a majority thereof, forego during the next five years their right to demand of the company the payment of more than two per cent. (2%) of the regular five per cent. (5%) annual interest. This reduced rate

Morris County Traction Co.—Approval of Trackage Agreement.

is considerably less than the company is now paying and will continue to pay, under the terms of the present lease or trackage agreement, to the security holders of the Morris Railroad Company. It is, of course, recognized, as was stated by the petitioner at the hearing on the aforesaid application, that the rights of none of the traction company's first mortgage bondholders can in any way be curtailed without his consent, but it may also be equally true that to enforce those rights would cost him more than the amount of interest he would waive by becoming a party to the aforesaid agreement, and that some of those who have given their assent thereto did so for such reason and not because they were in any way willing to accept a lower rate of interest in spite of the first mortgage bondholders of the railroad company continuing to get their regular 5 per cent. interest each year and its stockholders the equivalent of a considerably higher rate, thus reducing the amount which the traction company could, and would under that agreement, distribute pro rata among its first mortgage bondholders over and above the 2 per cent. (2%) annual interest provided for therein.

If the traction company had built that portion of its line which was constructed in the name of the railroad company, it would very likely have obtained the necessary funds solely through an issue of bonds and would not have raised half the required amount by issuing its capital stock as the railroad company was at that time required to do under the "General Railroad Act." Hence it could probably not be regarded as inequitable to any of the investors in the enterprise, if the amount of rental to be paid to the railroad company should be at least as much as the interest on the latter's outstanding bonds, which would be equivalent to a rate of return on its entire investment not quite as high as the present ratio of the traction company's net earnings to its outstanding funded debt. To the extent that the present rental yields a rate of return in excess of such ratio, it is, in the opinion of the Board, unjust and unreasonable.

For the reasons hereinabove indicated the Board withholds its approval of the lease or trackage agreement between the Morris County Traction Company and the Morris Railroad Company, and denies the application therefor.

Dated January 15th, 1918.

New Jersey Gas Co.—Petition for Increased Rates.

No. 503.**ON PETITION OF NEW JERSEY GAS COMPANY FOR INCREASED
RATES, EXCLUDING VINELAND AND LANDIS TOWNSHIPS,****AND****NEW JERSEY GAS COMPANY FOR INCREASED RATES IN VINELAND
AND LANDIS TOWNSHIP.**

1. In ruling upon an application for approval of an increase in rates by a gas company the Board estimates the rate per thousand cubic feet required to afford a revenue which will meet operating expenses and taxes, provide for amortization and admit of a return at the rate of six per cent. per annum on capital used and useful in the industry. The cost to the company for the interest, depreciation and repairs of its property on the customer's premises was also estimated.

2. The Board finds that a rate of \$1.25 per thousand cubic feet for gas consumed plus a service charge of 25 cents per month per customer would afford the revenue which the company is reasonably entitled to receive.

3. The increased charge approved is predicated on present abnormally high costs of operation and will be subject to revision when conditions as to cost of labor and materials shall return to substantially those existing in the year 1916.

T. J. Grayson and Norman Grey, for the New Jersey Gas Company.

Benjamin Stevens, for Landis Township.

S. W. Hurd, for the Borough of Vineland.

On June 16th, 1917, the New Jersey Gas Company filed with the Board the following rule:

"On and after July 1st. A. D. 1917, New Jersey Gas Company will charge one dollar and a half (\$1.50) net per thousand cubic feet of gas sold to domestic consumers. All discounts for cash payments are hereby abolished. The foregoing rate does not apply to the Borough of Vineland and Landis Township, where, for the present, the existing rate will be maintained."

On June 19th, 1917, the Board called a hearing for June 28th, 1917, on the question whether the proposed increase was just and

New Jersey Gas Co.—Petition for Increased Rates.

reasonable and also, by order, suspended the increase in the existing rate until the first day of October, 1917. The matter came on to be heard on June 28th. It will be noticed that the rule as filed applied to only a portion of the territory. At the first hearing counsel for the petitioner, amongst other things, stated the following:

"Then there is a further fact that I want to bring before the Commission. In the Borough of Vineland and Landis Township the New Jersey Gas Company has competition on the part of the Citizens Gas Company of Landis Township. I want to file a separate petition on the part of the New Jersey Gas Company, asking that the Commission take this fact under consideration and make an order after investigation decreeing that these two respondent gas companies shall raise their rate in equal ratio with the New Jersey Gas Company's. (That is, to \$1.50, net.) I will ask a hearing on that also."

In accordance with this statement, on June 29th, the New Jersey Gas Company filed two petitions.

The first asked "for an order empowering it to raise its rates for gas to domestic consumers within the Borough of Vineland and Township of Landis aforesaid, from \$1.00 per thousand cubic feet to \$1.50 per thousand cubic feet."

The second petition (New Jersey Gas Company, Petitioner, v. Citizens' Gas Company of Vineland and Citizens' Gas Company of Landis Township; Respondents), amongst other things, made the following allegation:

"Your petitioner further avers that coincidentally with this petition it has filed a petition asking that its own rate to domestic consumers of \$1.00 per thousand cubic feet of gas be increased to \$1.50 per thousand cubic feet of gas and that if said increase is granted and the respondents be allowed to continue to sell gas in said territory at the ruinously low rate of \$1.00 per thousand cubic feet which they now charge the result will be a condition of most unfair competition with your petitioner which will in the end react upon the community involved and cause great injury, dissatisfaction and poor service, so far as the sale and distribution of gas is concerned, to the inhabitants of the Borough of Vineland and Township of Landis aforesaid."

This second petition will be taken up in a separate report.

The representatives of the Borough of Vineland and of Landis Township entered a general denial as to the necessity of the increase in the rates in those municipalities as prayed for in the petition No. 1 above.

As has been heretofore set forth in reports by this Board, and

New Jersey Gas Co.—Petition for Increased Rates.

subject to certain limitations in the earlier period of its development (stated below), a public utility should be allowed to earn enough revenue to provide for the following outgo, viz.:

1. Reasonable operating expenses sufficient to provide for conducting its business, including current repairs and maintenance;
2. Taxes imposed upon it;
3. A sum sufficient to provide a reserve for annual depreciation accruing over and above current repairs and maintenance, from which replacements may be made when necessary, in order to preserve its investment intact;
4. A return on the investment sufficient to command needed capital.

It must have its operating expenses and taxes very early in its history. Items 3 and 4 are frequently not received in full until the utility is fairly well developed but in the long run all four items must be earned by the utility; if not, its capital becomes impaired, it cannot secure money for replacements or extensions, it will cease to furnish the service for which it was organized, and the public will be deprived of such service unless there is a re-organization with consequent losses to investors. The limitations referred to above are as follows:

1. During its earlier development period it cannot usually hope to impose rates which will provide a revenue to equal all four items referred to above.
2. The rate to the customer must at no time exceed the value of the service to him, even though the cost of rendering such service be in excess of the value of the service. If the cost of serving the customers as a whole continues to exceed the value of such service to the customers during a long enough period, the utility is doomed to failure through the inability of its promoters, at its inception, to correctly forecast the future.

It now becomes necessary to determine whether the schedules of domestic rates now in force are adequate to provide a sufficient revenue in the light of the foregoing statements, regardless of franchise provisions as to maximum rates to be charged. Consideration of this will be taken up in the following order, viz.:

I. The rates of the New Jersey Gas Company on the basis of uniform domestic rates throughout the territory now served from Glassboro.

New Jersey Gas Co.—Petition for Increased Rates.

II. The rates of the New Jersey Gas Company for domestic gas in Vineland Borough and Landis Township, if served from the plant located in Vineland, which is now leased to the New Jersey Gas Company, on the basis of independent operation of the local plant.

I. NEW JERSEY GAS COMPANY—UNIFORM DOMESTIC RATES THROUGHOUT ITS ENTIRE TERRITORY, DISREGARDING THE PROVISION OF FRANCHISES, NECESSARY TO PROVIDE AN ADEQUATE REVENUE.

The New Jersey Gas Company now serves the following municipalities:

In Camden County—Townships of Berlin, Centre, Clementon, Gloucester, Voorhees and Waterford; Borough of Laurel Springs.

In Cumberland County—Vineland Borough and Landis Township, in competition with Citizens' Gas Company of Vineland and Citizens' Gas Company of Landis Township, subsidiaries of the Millville Gas Light Company.

In Gloucester County—Townships of Deptford, East Greenwich, Franklin, Glassboro, Harrison, Logan, Mantua, Monroe and Washington; Boroughs of Clayton, Woodbury Heights, Pitman and Swedesboro.

In Salem County—Townships of Oldman, Pilesgrove, Pittsgrove, Upper Pennsgrove, Upper Pittsgrove; Boroughs of Elmer, Pennsgrove and Woodstown.

The rates for domestic gas now in effect in this territory are as follows:

In the Borough of Vineland and Landis Township, \$1.00 per 1,000 cubic feet net for gas sold through both ordinary and prepaid meters.

In the Borough of Swedesboro, \$1.50 gross for gas sold through ordinary meters, less 10 per cent. discount for prompt payment; \$1.40 for gas sold through prepaid meters.

Throughout the remainder of the territory served, \$1.50 gross for gas sold through ordinary meters, less 8 per cent. discount for prompt payment; \$1.40 net for gas sold through prepaid meters.

New Jersey Gas Co.—Petition for Increased Rates.

New Jersey Gas Company—Capital Used and Useful Only.

Based on Exhibits P-5, P-6 and the petitioner's 1916 annual report, filed with the Board, Table I. has been compiled to show the *average* present value of the petitioner's property affected with a public use at the *middle* of each period (this will differ from the date taken by the petitioner). The present value of the petitioner's tangible and intangible fixed capital at June 30th, 1913, shown on P-5 is based on the values thereof determined by the Board in the matter of the *Township of Mantua et al. v. New Jersey Gas Company* (P. U. R. N. J., Vol. IV., p. 329). To the fixed capital, so derived, net book additions are added to ascertain the values at subsequent dates (P-5, P-6), to which 5 per cent. of the physical value at each date is added for working capital. No additional depreciation is deducted for the reason that the depreciation reserve of \$17,258.48, shown at December 31st, 1913, had decreased to \$16,028.49. This indicates that the annual amortization charged to expense had not equaled even the replacements, and that less than no fund for future replacements had been provided out of earnings.

TABLE I.

NEW JERSEY GAS COMPANY—CAPITAL USED AND USEFUL ONLY.

	1916. 12 months. At 7-1-16.	1917. 8 months. At 5-1-17.	1917. 12 months. At 7-1-17.
Present value, at 6-30-13—			
Of tangible fixed capital.....	\$965,820	\$965,820	\$965,820
Of intangible fixed capital.....	115,395	115,395	115,395
Book value of net additions from 7-1-13 to 7-1-16	86,640	86,640	86,640
Book value of net additions from 7-1-16 to 5-1-17		38,595	38,595
Book value of net additions from 5-1-17 to 7-1-17			5,475
Subtotals	\$1,167,855	\$1,206,450	\$1,211,925
Working capital, 5 per cent. of tangible fixed capital	52,623	54,553	54,827
Total capital at dates given....	\$1,220,478	\$1,261,003	\$1,266,752
Taken as	\$1,220,000	\$1,261,000	\$1,267,000

New Jersey Gas Co.—Petition for Increased Rates.

Total Revenue Required from All Gas Sales, Subject to Adjustments.

Table II. is made up in the following manner: Six per cent. per annum (legal interest only) is taken on the capital shown in Table I.; Operating Expenses and Taxes (less amortization or depreciation expense) for 1916 are taken from the 1916 annual report, and, for subsequent dates from the petitioner's exhibits; Annual Amortization (or depreciation expense) is taken according to the petitioner's rule.

TABLE II.

NEW JERSEY GAS COMPANY—REVENUE REQUIRED FROM ALL GAS SALES.
(Amortization by Petitioner's Rule.)

	1916—12 Months.		1917—8 Months.		1917—12 Months.	
	Amount.	Per M. Cu. Ft.	Amount.	Per M. Cu. Ft.	Amount.	Per M. Cu. Ft.
Capital on July 1st.....	\$1,220,000	\$0.0517	.....	.....	\$1,267,000	\$6.7972
Capital on May 1st.....	.....	.....	\$1,261,000	.....	.....	.....
6% per annum on capital..	\$73,200	\$0.4231	\$50,440	\$0.4255	\$76,020	\$0.4078
Operating expenses, taxes..	129,782	0.7501	110,478	0.9321	173,480	0.9307
Subtotal	\$202,982	\$1.1732	\$160,918	\$1.3576	\$249,500	\$1.3385
Amortization (Co.'s rule)..	2,140	0.0124	2,385	0.0201	3,600	0.0193
Revenue required	\$205,122	\$1.1856	\$163,303	\$1.3777	\$253,100	\$1.3578
Deduct sundry sales.....	3,207	0.0185	4,578	0.0386	5,878	0.0315
Required gas revenue.....	\$201,915	\$1.1671	\$158,725	\$1.3391	\$247,222	\$1.3263
Gas revenue produced by present rates	217,792	1.2589	149,974	1.2653	231,136	1.2400
Profit or loss (*).....	\$15,877	\$0.0918	\$8,751	\$0.0738	\$16,066	\$0.0863
Gas sold, M. Cu. Ft.....	\$173,006	.....	\$118,531	.....	\$186,400	.....

Adjustments to be Made to Table II.

On the basis shown, all gas sold has been treated as costing the same; this is not necessarily true. For street lights, the cost of the gas consumed, with the street light maintenance added, should be higher than the cost of domestic gas; industrial or wholesale gas, on the contrary, will be lower. As the former approximates 6 per cent., and the latter also 6 per cent. of gas sold, in the

New Jersey Gas Co.—Petition for Increased Rates.

absence of specific data, it is assumed that the average for all gas will be a sufficiently close approximation for the purpose of deriving the cost of domestic gas.

It will be noted that the required revenue is apparently \$1.1671 per thousand cubic feet for 1916, \$1.3391 for the first eight months of 1917, and, as taken, \$1.3263 for all of 1917. This \$1.3263 must be adjusted, however, as follows:

(a) The required revenue for 1917 is predicated on the costs for the first eight months; during the early part of the year the costs had not increased so markedly as they did during the latter part of the eight months, and during the last third of the year. The additional cost, if based on probable current prices in 1918, would add 5 cents to the costs for the year 1917 as shown.

(b) Franchise taxes are to increase 1 per cent. of Gross Revenue in 1918, 2 per cent. in 1919, and 3 per cent. in 1920, in addition to war taxes. This may be taken as an increase of 3 cents per thousand cubic feet for all gas sold during 1918, 1919 and 1920.

The net sum of these two items would, therefore, appear to be 8 cents per thousand cubic feet sold. This 8 cents added to \$1.3263 required revenue shown for 1917 in Table II. indicates a required revenue (throughout the territory served) of an average of \$1.40 net per thousand cubic feet of gas sold.

An analysis of industrial gas costs would probably indicate that a block rate schedule should be developed which, for any probable consumption, would produce an average revenue for the total of all blocks of the largest customer at least equal to 70 per cent. of the base domestic rate.

Revenue from domestic customers at \$1.40 average. We will approximate the classes of consumption by details furnished in petitioner's Exhibits P-8 and P-9 and in its 1916 Annual Report to the Board, as follows:

CLASSES OF CONSUMPTION, 1917.

Total gas sales estimated by petitioner at.....	186,400 M. cu. ft.
Estimated wholesale gas	11,000 M. cu. ft.
Estimated street light gas.....	10,000 M. cu. ft.
Estimated domestic gas	165,400 M. cu. ft.

New Jersey Gas Co.—Petition for Increased Rates.

This indicates a domestic consumption of 165,400 thousand cubic feet for 1917. At \$1.40 per thousand cubic feet average rate this would produce a revenue of \$231,560.

Service Charge.

(Restricted to property on consumers' premises.)

In a recent report of the Board in the matter of the application of the New Jersey Northern Gas Company in re rates will be found a discussion of the nature of this charge. In brief, as used in that report, it was the monthly or annual cost to the company for the interest, depreciation and repairs of the company's property on the customer's premises and devoted to his individual use. In the petitioner's case the cost of this property may be approximated as follows:

Service pipe: Exhibit P-7 shows that the petitioner had, on August 31st, 1917, 13,208 services; on its report *In re Mantua v. New Jersey Gas Company* (P. U. R. N. J., Vol. IV., p. 318), the Board excluded 1,722 services. This leaves 11,486 services costing by Exhibit P-5, \$190,213.

Average cost per service of.....	\$16.56
Meters—Exhibit P-7 shows that the petitioner had 10,521 meters which cost (P-5) \$82,215, or an average cost per meter of.....	7.81
Total	\$24.37
Six per cent. interest, 1 per cent. taxes, 4 per cent. depreciation on \$24.37 is	\$2.68
Service repairs (\$1,905÷11,486).....	0.17
Meter maintenance, 1916 annual report.....	\$2,415
Work on consumers' premises, 1916 annual report.....	3,732
Subtotal	\$6,146
Average cost of same per customer (\$6,146÷9,500) is.....	0.64
Average service charge per customer, large and small.....	\$3.49

This calculation shows that it will cost the company for readiness to serve in respect to the average amount of property on consumers' premises \$3.49 per annum. But as this includes both

New Jersey Gas Co.—Petition for Increased Rates.

small and large services and meters, it appears reasonable to take \$3.00 as the annual cost for the ordinary domestic consumer, using a 5-light meter or smaller. The service charge for larger meters would be increased at the rate of approximately one cent per light of capacity in excess of 5-light, per month.

Records on file with the Board indicate that the number of readings of consuming meters of the petitioner in a year will equal ten times the number installed in August. Exhibit P-7 shows that the petitioner had 10,521 meters on August 31st, 1917. Assuming that 521 were in store-room or repair shop or used for wholesale customers, this would leave 10,000 meters installed on domestic consumers' premises. This indicates approximately 100,000 readings during 1917. If each customer had paid the service charge of 25 cents per monthly reading, the revenue derived would approximate \$25,000 for the year.

The total revenue required has been shown to be.....	\$231,560
Derived from estimated service charges.....	25,000
	<hr/>
To be derived from 165,400 thousand cubic feet of gas.....	\$206,560

This would require a rate for gas consumed of \$1.25 net per thousand cubic feet consumed, and 25 cents per month per customer (using a 5-light meter), as compared with an average charge of \$1.40 for gas consumed without a service charge.

Attention is called to two things with respect to the foregoing:

First—The rates as deduced apply to gas sold to domestic customers, and do not apply to the rates for industrial gas or municipal and private street lights.

Second—The company has not been making adequate provision for an amortization or depreciation reserve from which to replace superseded or worn out plant and equipment when withdrawn from service, nor has this been practicable until 1916 for the reason that its capital per thousand cubic feet sold was so high. This will be more apparent from a consideration of

New Jersey Gas Co.—Petition for Increased Rates.

TABLE III.

NEW JERSEY GAS COMPANY—CAPITAL PER M. CUBIC FEET OF GAS SOLD.

Year. July 1st,	Capital Used and Useful.		Working Capital.*	Total Capital.	M. Cu. Ft. of Gas Sold.	Capital per M. Cu. Ft. of Gas Sold.
	Intangible.	Tangible.				
1913	\$115,395	\$965,820	\$48,291	\$1,129,506	135,000	\$8 37
1914	115,395	984,996	49,250	1,149,641	146,633	7 84
1915	115,395	1,008,722	50,436	1,174,553	154,488	7 60
1916	115,395	1,052,460	52,623	1,220,478	173,006	7 05
1917	115,395	1,096,530	54,827	1,266,752	186,400	6 80

* 5 per cent. of tangible capital.

From Table III. it may be readily seen how the increase in the amount of gas sales tends to decrease the amount of capital required per thousand cubic feet of gas sold. As interest and very largely depreciation are both taken as a percentage of the capital, and both are elements in the cost of gas, the decrease, from 1913 to 1917, of \$1.57 in capital required per thousand cubic feet of gas sold will effect a decrease in the cost of gas of 12.56 cents on a basis of 8 per cent. for interest and depreciation combined, of 14.13 cents on a basis of 9 per cent., and 15.7 cents on a basis of 10 per cent. Operating expenses and taxes will also tend to decrease under normal conditions as the consumption increases. It is, therefore, reasonable to assume that if the costs shown above are not further increased by reason of the war the tendencies shown will continue to operate, and that the company will be able to gradually increase its appropriations for the purpose of increasing its reserve for depreciation, both for the protection of the holders of its securities and to the end that service may not be impaired by reason of the fact that provision for replacements has not been made.

II. RATES OF THE NEW JERSEY GAS COMPANY FOR DOMESTIC GAS USED IN VINELAND BOROUGH AND LANDIS TOWNSHIP IF SERVED FROM THE PLANT LOCATED IN VINELAND WHICH IS NOW LEASED TO THE NEW JERSEY GAS COMPANY ON THE BASIS OF INDEPENDENT OPERATION OF THE LOCAL PLANT.

We have heretofore considered the question of the rates of the New Jersey Gas Company on the theory that the company's rates

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were to be uniform throughout the entire territory including Vineland and Landis Township, where competitive conditions exist. The counsel for the Borough of Vineland contended that section 8, of ordinance No. 88, Borough of Vineland, required the operation of this plant during the life of the ordinance and asked that the New Jersey Gas Company should segregate Vineland and Landis Township and show or estimate the cost of gas if manufactured and sold locally in the plant now existing. The representatives of the New Jersey Gas Company failed to comply with the request of counsel in this respect and the record itself does not show figures from which a conclusion may be formed. Inasmuch, however, as the plant and property of the New Jersey Gas Company located in Vineland and Landis Township were valued in the rate case of the Township of Mantua et al. v. New Jersey Gas Company, hereinbefore referred to, it is possible to arrive at the valuation of the plant at June 30th, 1913. The generating and purifying capacity of this plant, however, is limited to a maximum capacity of 100,000 cubic feet of gas per day without reserve capacity. To produce and sell 45,000,000 cubic feet of gas per year which is the estimated consumption in this territory, for 1917, would require that the capacity be increased about 150 per cent. in order to take care of peak loads in producing this amount of gas and to provide the present apparatus as a reserve in case of breakdown.

In Table IV., which follows, figures are given which show that the approximate cost of the property required in the manufacture of this amount of gas would aggregate approximately \$183,000 without taking into consideration extensions of mains, services and meters, which have been installed since June 30th, 1913. The total sales in Vineland and Landis Township for 1913 were 35,058,000 cubic feet, of which about 6,000,000 was wholesale gas. Inasmuch as the increase in sales of gas in Vineland and Landis Township has been almost evenly divided, the domestic consumption is now approximately 34,000,000 cubic feet a year; the wholesale consumption accounts for the remaining increase and acts to reduce the average revenue per thousand cubic feet received by the company on the larger consumption.

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TABLE IV.

NEW JERSEY GAS COMPANY—COST OF LOCAL PLANT ADEQUATE TO SERVE
VINELAND AND LANDIS TOWNSHIP.

Acc. No.		Cost to Reproduce.	Accrued De- preciation.	Present Value.
101	Land	\$2,700	.....	\$2,700
102	Intangibles .....	.....	.....	.....
103	.....	.....	.....	.....
106	General structure .....	.....	.....	.....
107	General equipment	642	32	610
108	Works and station structures....	10,053	1,765	8,288
108	Minor structures	76	4	72
108	Tanks and wells	490	38	452
109	Holders	13,194	7,929	11,265
110	Boilers and furnaces	2,028	377	1,651
114	Benchs and retorts	7,566	4,386	3,180
115	Water gas sets	4,746	349	3,797
116	Purification apparatus	3,938	1,507	2,431
117	Accessory equipment	4,227	1,914	2,313
118A	Transmission mains, Landis.....	14,086	1,081	13,005
118B	Distribution mains, Landis	57,688	17,926	39,762
119	Services, estimated at one-sixth of all	32,670	3,450	20,220
120	Meters, estimated at one-fifth of all,	15,100	3,000	12,100
121	Meter installations	3,000	170	2,830
122	Street lighting fixtures .....	.....	.....	.....
124	Gas tools and implements.....	377	17	360
125	Laboratory equipment—estimated as independent	400	25	375
	Plant tangible	\$178,981	\$44,570	\$134,411
102-3	Plant intangible, 15 per cent.....			20,162
	Fixed capital			\$154,573
	Working capital, 6¼ per cent.....			8,400
				\$162,973
	Additional generating, purifying and accessory equipment..			20,000
	Present value of capital in 1913, supplemented.....			\$182,973
	Taken as			*\$183,000

*Does not include additions to distribution system since 1913.

In Table V. is given an estimate on the basis shown therein of furnishing gas during the year 1913 which is taken to represent normal costs at the time the investigation was made as to rates.

New Jersey Gas Co.—Petition for Increased Rates.

TABLE V.

NEW JERSEY GAS COMPANY.

Estimated Cost of Gas in Vineland if Local Plant were Reinforced with Additional Plant Capacity. Operations as of 1913, Based on Actual Results.

	Amount.	Average Cost per M. cu. ft. Sold.
Necessary plant based on appraisal made as Ex. C-14 in re Township of Mantua et al. v. New Jersey Gas Company, present value 6-30-1913, of tangible plant plus 15 per cent. for intangible capital and 6¼ per cent. working capital; also \$20,000 added for additional generating, purifying and accessory equipment. Total capital taken as.....	\$183,000	.....
1. Return on capital, 6 per cent. (legal interest only) ..	\$10,980	\$0.313
Production expense estimated at.....	18,500	0.528
Distribution expense estimated at.....	1,800	0.051
Commercial expense estimated at.....	2,200	0.062
New business expense estimated at.....	600	0.017
General and miscellaneous expense estimated at....	4,100	0.117
Subtotal	\$27,200	\$0.776
Amortization or depreciation, 2 per cent. of capital..	3,660	0.104
Operating expense estimated at.....	\$30,860	\$0.880
Taxes, 1¼ per cent. of capital.....	2,300	0.066
Uncollectible bills	100	0.003
2. Revenue deductions	\$33,260	\$0.949
3. Return plus deductions (1) and (2).....	\$44,240	\$1.262

This shows that the cost of manufacturing and delivering 35,058,000 cubic feet of gas sold to be \$44,240, including only legal interest on the capital required, an average cost of \$1.262 per thousand. Of the 35,058,000 cubic feet, 6,000,000 cubic feet is estimated to be sold at an average wholesale rate of 70 per cent. of the retail rate, which, in terms of domestic gas, would be equivalent to 33,258,000 cubic feet of gas sold. As this is estimated to have cost \$44,240, this would equal domestic rate of \$1.33 and a rate of \$0.931 for the larger wholesale consumers. If the 6,000,000 cubic feet of wholesale gas had been sold at 76

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cents the revenue received would have been \$4,560; this, deducted from \$44,240, would have left a revenue of \$39,680 to be derived from domestic gas sales, or about \$1.37, which is substantially the revenue derived from the rest of the territory. As hereinbefore stated, however, the latter rate is believed to be too low in proportion to a domestic rate of \$1.33.

Assuming the consumption of 45,000,000 cubic feet for 1917, 1,000,000 more than shown in the 1916 report of the company, and assuming this consumption to be manufactured at prices prevailing in the last quarter of 1917, we have the following resulting cost. We assume that the average normal cost of \$1.262 in 1913 will have decreased to \$1.20 by the increased production which serves to distribute the fixed costs and overhead over a large number of cubic feet sold. On the other hand, we estimate that the increased production expense due to the rise in labor, and material would add 22 cents to this, which would make \$1.42 as the *average* cost of all gas. This would cost about \$63,900 for 45,000,000 cubic feet. But the domestic consumption for 1917 is shown by testimony (page 69) to be 75 per cent. or approximately 34,000,000 cubic feet and the wholesale consumption to be 11,000,000 cubic feet. Assuming that the wholesale gas was sold at 70 per cent. of the domestic gas, this is equivalent to the sale of 41,700,000 cubic feet of gas in terms of the domestic rate on the basis of a cost of \$63,900. Forty-one million seven hundred thousand cubic feet would indicate a domestic rate of \$1.53 per thousand cubic feet and 70 per cent. of this would indicate an average rate of \$1.07 per thousand cubic feet for the largest wholesale consumers. These rates are derived on the basis that both the Borough of Vineland and Landis Township are to be supplied as was the case when the Vineland plant was operated.

The estimates as shown above are believed to be fair and conservative. It would appear, then, that in normal times the cost of gas made and sold in the Borough of Vineland and Landis Township, for domestic purposes would be, within a few cents, the same as that for gas made by the company's larger central plant located at Glassboro. In this connection it is to be noted, however, that the capital assumed as a base for rates in the calculations shown in Table I. of this report excluded all the gener-

New Jersey Gas Co.—Petition for Increased Rates.

ating, purifying and other property, not used or useful, in manufacturing gas not only in Vineland, but also in Swedesboro and Pennsgrove, and also excludes the excess capacity both of building and equipment in Glassboro which was not yet used or useful in 1913 in the manufacture of gas. The total capital so excluded was \$107,787 value new or \$88,671 present value. In the above calculations, relating to Vineland and Landis only, of course, the generating, purifying and other plant equipment used in Vineland supplemented as shown, is taken and all property outside of the Borough of Vineland and Landis Township is excluded. On the other hand, Landis Township is included with the Borough of Vineland for the reason that neither the record nor the annual reports separate the consumption in the competitive territory. The only indication is in P-12 which refers to 25,000,000 cubic feet. If this were taken as a basis, the rates above shown would be, of course, increased quite materially.

A comparison of the cost of \$1.53 in Vineland and Landis Township, considered separately in 1917, with the rate of \$1.40 as derived for the entire territory would seem to indicate that these two municipalities would not be discriminated against if required to pay the lower *average* rate of \$1.40 for domestic consumption, or \$0.98 for the largest block of wholesale gas; or, the alternative schedule of 25 cents a month service charge when served through a five-light (or smaller) meter, without gas, and \$1.25 for the gas actually consumed. If this analysis is correct, it does not appear that, under conditions now existing, with the much larger output now being manufactured by the Glassboro plant, that the Township of Landis and the Borough of Vineland combined, or the Borough of Vineland alone, could be served as cheaply as from the Glassboro plant.

There is a certain amount of duplication of plant and property expense in the territory of the Borough of Vineland and Landis Township owing to the competition existing, but the amount of this when related to the combined total sales of about 325,000 thousand cubic feet (i. e., 186,000 and 139,000 M. cu. ft.) in the combined territory of the New Jersey Gas Company and the Millville Gas Light Company and subsidiaries would not be enough to materially affect the figures derived above.

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The testimony conclusively shows the imperative need of increased revenues to the company if it is to continue to furnish adequate and proper service to its customers, and to enable it to pay necessary interest on bonded indebtedness, but no dividends on stock. The Board does not approve of the method or form proposed by the company for obtaining such increased revenues and, therefore, disapproves the proposed rule of the company "abolishing all discounts for cash;" nor will it permit the company to raise its rates for gas to domestic consumers within the Borough of Vineland and the Township of Landis from \$1.00 per thousand cubic feet to \$1.50. The several petitions herein referred to will, therefore, be dismissed.

The Board, however, having made this exhaustive investigation and analysis of what would be a fair and reasonable rate to be charged by the New Jersey Gas Company per thousand cubic feet of gas sold to domestic consumers uniformly throughout the whole territory served by it, and being guided by the declarations of the representatives of the preferred municipalities that they would not oppose the imposition of increased rates required to meet the needs of the company, suggests as a schedule of rates to be considered for domestic service throughout the territory served by it the following:

Each connected customer shall pay a "readiness to serve" charge of 25 cents per month (five-light meter) without gas.

For all gas consumed the customer shall pay \$1.25 net per thousand cubic feet of gas actually consumed.

The suggested schedule is predicated on present abnormally high costs of operation, and will be subject to revision by this Board when conditions as to cost of labor and material shall return to substantially those existing in the year 1916.

Dated January 18th, 1918.

New Jersey Gas Co. v. Citizens Gas Co. of Vineland et al.

No. 504.**ON PETITION OF NEW JERSEY GAS COMPANY v. CITIZENS GAS COMPANY OF VINELAND AND CITIZENS GAS COMPANY OF LANDIS TOWNSHIP—TO INCREASE RATES.**

A gas company applying for an increase in its rate to domestic consumers alleges that if the same is allowed and other companies operating in a part of the territory served are allowed to continue to sell at the old rate unfair competition will result. The Board is asked to fix the rate the competing companies should charge. *Held:*

1. To ascertain the justice and reasonableness of rates charged by utilities requires detailed proof of the elements to be considered. No attempt has been made to segregate the properties of the respondent companies, nor were the operating costs analyzed.

2. To make any determination as to the justice and reasonableness of the rates of the companies complained of upon the record before the Board and upon the meagre facts submitted would be impracticable and doubtless unfair to the customers of the companies who have had no opportunity to be heard.

T. J. Grayson and Norman Grey, for New Jersey Gas Company.

H. C. Bartlett and S. J. Franklin, for Citizens Gas Company of Vineland and Citizens Gas Company of Landis Township.

S. W. Hurd, for Borough of Vineland.

Benjamin Stevens, for Landis Township.

The New Jersey Gas Company, in its petition filed June 29th, 1917, alleges

"that coincidentally with this petition it has filed a petition asking that its own rate to domestic consumers of \$1.00 per thousand cubic feet of gas be increased to \$1.50 per thousand cubic feet of gas and that if said increase is granted and the respondents (Citizens Gas Company of Vineland and Citizens Gas Company of Landis Township) be allowed to continue to sell gas in said territory at the ruinously low rate of \$1.00 per thousand cubic feet which they now charge the result will be a condition of most unfair competition with your petitioner which will in the end react upon the community involved

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and cause great injury, dissatisfaction and poor service, so far as the sale and distribution of gas is concerned, to the inhabitants of the Borough of Vineland and Township of Landis aforesaid."

The petitioner further alleged that the respondents indulged in unfair competition in that they used \$2.00 wheels in the meters, the excess over the amount due for gas being applied to the payment of bills for merchandise, which wheels were not always promptly removed. The petitioner further prayed

"That full investigation of all the conditions under which gas is now manufactured and supplied to the consumers in the Borough of Vineland and Township of Landis, both by your petitioner and the respondents, and that as a result of such investigation your Board will make a further order prescribing the rates which the said Citizens Gas Company of Vineland and Citizens Gas Company of Landis Township will be allowed to charge consumers in this territory for supplying gas and your petitioner finally prays that said rates so prescribed shall not be less than the rate or rates which your Honorable Board shall order and prescribe your petitioner to charge to its consumers for gas supplied by them within the same territory."

The Citizens Gas Company of Vineland and the Citizens Gas Company of Landis Township made a joint and several answers in which they deny they have ever introduced price wheels in meters for the purpose of collecting more than \$1.00 per thousand cubic feet of gas for gas used by the consumers or that they have ever charged or collected more than \$1.00 a thousand cubic feet for gas served in Vineland or Landis Township under the present franchise.

Respondents join with the petitioner in a request

"that your Honorable Board will make a full investigation of all of the conditions under which gas is now manufactured and supplied the consumers in the Borough of Vineland and Township of Landis both by your petitioner and the respondents and that if the result of such investigation warrants, your Board will make such order as it may deem necessary prescribing the rates which the said Citizens Gas Company of Vineland and Citizens Gas Company of Landis Township will be allowed to charge consumers in this territory for supplying gas, providing the same investigation and order will cover the territory supplied with gas by the Millville Gas Light Company in Millville and Buena Vista district, and that your Honorable Board will make an order fixing the rates to be charged in the territory covered by the New Jersey Gas Company outside of the Borough of Vineland and Township of Landis at the same price and rate as shall be fixed for that company to charge in the Borough of Vineland and Township of Landis, and said rates so prescribed shall not be less than the rates fixed to be charged by the respondents in the Borough of Vineland and Township of Landis."

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The Millville Gas Light Company includes nine subsidiary companies, of which the Citizens Gas Company of Vineland and the Citizens Gas Company of Landis Township are two.

To ascertain the justice and reasonableness of rates charged by utilities requires detailed proof of the elements to be considered. The proofs offered in the present proceeding are entirely insufficient to support a conclusion as to the reasonableness or unreasonableness of the rates now charged in Vineland and Landis Township by the respondent companies. An appraisal of the property of the Millville Gas Light Company is in evidence but this company is the parent company of the respondent companies and operates them under lease in Vineland, Landis Township and Buena Vista. No attempt was made to segregate the properties of the respondent companies, nor were the operating costs analyzed. The rates of the respondent companies are thus brought into these proceedings collaterally by a competitor who seeks to raise its own rates and in so doing seeks to have the rates of its competitor increased so as to eliminate, as far as possible, the competition it will be met with in the same territory. It does not necessarily follow that a just and reasonable rate to be charged for gas by two competing companies, supplying the same territory from different sources, should be the same.

To make any determination as to the justice and reasonableness of the rates of the Citizens Gas Company of Vineland and Citizens Gas Company of Landis Township or the Millville Gas Light Company upon the record before us and upon the meagre facts submitted would be impracticable, and doubtless, unfair to customers of these companies who have had no opportunity to be heard in this proceeding.

The petition, therefore, will be dismissed.

An order will so enter.

Dated January 18th, 1918.

ORDER.

This case having been duly heard and submitted by the parties, and full investigation of the matters and things involved having

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been had, and the Commission having, on the date hereof, made and filed a report, containing its findings of fact and conclusions thereon, which said report is hereby referred to and made a part hereof,

IT IS ORDERED that the petition in this proceeding be, and it is hereby, DISMISSED.

Dated January 18th, 1918.

No. 505.

PETITION FOR MODIFICATION OF ORDER IN THE MATTER OF THE
INQUIRY AS TO THE JUSTICE AND REASONABLENESS OF THE
RATES OF THE NEW YORK TELEPHONE COMPANY.

1. A proceeding once concluded and a finding made should not be reopened and reheard merely because of an expression of dissatisfaction with the result.

2. When a case is closed and an order entered, if application is made for consideration of additional facts the first question to be considered is whether the facts alleged are of such a nature that if supported by competent evidence at a rehearing their consideration may lead to a conclusion different from that expressed.

3. If the facts alleged do not differ from those already considered, or if it is apparent that, if fully proven, a fair and reasonable consideration thereof would not result in changing the Board's conclusion, no rehearing is necessary and the petitioner is deprived of no right or privilege because the same is not ordered.

On November 20th, 1917, this Board filed a report stating its findings of fact and conclusions thereon, following its inquiry as to the justice and reasonableness of the rates of the New York Telephone Company. On the same date the Board adopted an order directing the said New York Telephone Company to file with the Board within sixty days from the date of its order, tariffs which would effect annually a reduction of net revenue of not less than eight hundred thousand dollars (\$800,000).

On the nineteenth day of January, 1918, there was delivered to the office of the Board a petition of the New York Telephone

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Company which recites, *inter alia*, that the Board's opinion and order "were based upon the results of operation of your petitioner in the State of New Jersey during 1916 and the years preceding and the Board did not have before it nor take into consideration any data showing the actual results of the operations of your petitioner in New Jersey during the year 1917 or any portion thereof, nor did the Board have before it any estimates of the probable results of operation during the year 1918, although the Board did consider as a general proposition, and so states in its said opinion, that 'the data which forms the basis of the exercise of the power relates to a date already some time in the past.' In the meantime conditions have materially changed; annual taxes have increased; special war taxes have been and will be imposed; the trend of the cost of labor and materials has been substantially upward; and the proof in fact shows that operating expenses have been and are on a steadily ascending scale. * * *

"Your petitioner further shows that, owing to the increase in taxes and in the cost of material and labor, the operating ratio of your petitioner constantly increased during the year 1917 and particularly during the latter half thereof and is still continuing to so increase, and, according to the most careful estimates which the officials of your petitioner are able to make for the year 1918, and using the findings of this Board in its said opinion as the basis therefor, the average fair value of the property used and useful by your petitioner in the State of New Jersey during the year 1918 will be \$36,271,035; that the books of your petitioner will show that the net revenue from operations in the State of New Jersey for the year 1918 will be \$2,437,586; that, making adjustments of revenues and operating expenses according to the principles announced in the said opinion of the Board to comport with the methods employed in ascertaining the fair value of the property, the net revenue for the year 1918 will be \$2,846,220, or a return of 7.85 per cent., which will be a deficit below the 8 per cent. which the Board in its said opinion found to be a reasonable return. * * *

The Board is asked by the petitioner to vacate its order of November 20th, 1917, and to proceed to investigate "the actual results of operation of your petitioner in New Jersey during the

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year 1917 and the probable result from operation during the year 1918, in which investigation your petitioner will co-operate to the fullest extent and will freely produce for the Board all of the data in its possession which might be helpful to enable the Board thereafter to enter such further and different order as the conditions would indicate to be meet and just."

Section 31 of the "Public Utility Act" (Chap. 195, P. L. 1911) provides that "The Board at any time may order a re-hearing and extend, revoke or modify any order made by it." It seems to the Board that as its orders must be preceded by hearings, an order, so preceded, should not be extended, revoked or modified unless a re-hearing is held. It is evident that a proceeding once concluded and a finding made should not be re-opened and re-heard merely because of an expression of dissatisfaction with the result. When a case is closed and an order entered, if application is made to the Board to give consideration to additional facts the first question to be decided is whether the facts alleged are of such a nature that if supported by competent evidence at a re-hearing their consideration may lead to a conclusion different from that already expressed. If so the petitioner is reasonably entitled to a re-hearing. If, however, the facts alleged do not differ from those already considered, or if it is apparent that, if fully proven, a fair and reasonable consideration thereof would not result in changing the Board's conclusion, no re-hearing is necessary, and the petitioner is deprived of no right or reasonable privilege because the same is not ordered.

In the case before us the petitioner urges that the Board found 8 per cent. to be a reasonable return to the company. It is claimed that owing to the abnormal conditions prevailing, the net return for the year 1918 will be 7.85 per cent. It is urged that because of this the Board should investigate the actual results of operation during the year 1917 and the probable results from operation for the year 1918. The only reason why such investigation should be made apparently is to enable the petitioner to prove that its net return for the year 1918 will be but 7.85 per cent. Assuming, for the purpose of this report, this to be true there would still remain to the company a substantial net return. If holding 8 per cent. to be a reasonable return means that at no

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time and under no conditions should the return fall below this, and that if it does so fall the company should be permitted to charge increased rates, then it would be clearly entitled to further hearing and opportunity to submit proof in support of the statement that the return for 1918 will be 7.85 per cent. This is not, however, a correct interpretation of the Board's finding.

A rate of return is not and cannot be regarded as so rigidly fixed that it may never be diminished or exceeded during the time it is adjudged reasonable.

It represents the average which is regarded as reasonable and which it is believed will be obtained during a reasonably long period of time.

It does not follow that because exceptional conditions of a temporary nature adversely affect the operating expenses of a utility and its rate of return falls below eight per cent., such return is unreasonably low, any more than because such exceptional conditions favorably affecting it and causing its rate of return to rise temporarily above eight per cent. make the rate unreasonably high.

In an exhibit attached to the company's petition the net revenue on the fair value of the company's property is given as follows:

1916.	1917.	1918.
		<i>Estimated.</i>
10.96%	10.13%	7.85%

It is true that a rate to apply in the future should not be fixed below that which is reasonable in order that a utility may be compelled to make refunds to those who have been charged an unreasonable rate in the past. It may be stated, however, that if the Board had been able to conclude this investigation two years before it did the rate would have been then lowered and the company would not have received the unreasonably high returns it obtained during 1916 and 1917.

When it is considered that these two years have been marked by rising costs for materials and labor and that during the last of these years the conditions in this respect were abnormal, it is the Board's opinion that even though accentuation of such conditions during the year 1918, may cause the decrease in the return as

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alleged by the company this decrease would not be sufficient to justify the Board in holding its order of November 20th to be unreasonable. In times like these, when sacrifices are required of all, public utilities which have enjoyed exceptional prosperity in the past and whose charges have been more than would have been regarded as reasonable had they been ruled upon before, and which, notwithstanding the adverse general conditions will receive a substantial net return, should not be expected to be relieved from all risk of receiving a return somewhat less than that which is held to be reasonable as a normal standard.

It is the judgment of the Board that if the statement in the company's petition as to its probable return for the year 1918 be accepted as an accurate estimate, the Board, notwithstanding the fact that upon such estimate this return will be less than eight per cent., would not be justified in holding that under existing conditions the reduction in rates ordered will cause the return for 1918 to be unreasonably low.

The Board will not order a re-hearing in this matter and its order adopted November 20th, 1917, will not be revoked.

Dated January 22d, 1918.

No. 506.

IN RE APPLICATION OF UNION RAILWAY, GAS AND ELECTRIC COMPANY AND SPRINGFIELD RAILWAY AND LIGHT COMPANY, FOR AUTHORITY TO MERGE THE SPRINGFIELD RAILWAY AND LIGHT COMPANY INTO THE UNION RAILWAY, GAS AND ELECTRIC COMPANY.

1. In effect, the merger or consolidation of corporations is the organization of a new corporation and is subject to all the limitations imposed by law.

2. If a new corporation is organized by a merger or consolidation the Board must ascertain whether or not the assets behind its securities are in amount sufficient to conform with the requirements imposed by the state upon companies newly incorporated, and must be satisfied that such merger will not by any of its terms subject any security holder in any of the consolidating or merging companies to an unfair or inequitable condition or arrangement.

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3. Sufficient testimony has not been presented to satisfy the Board that the merger would not by its terms subject any security holder to an unfair or inequitable arrangement.

William L. Christman, Norman Grey and Joseph S. Clark, for petitioners.

L. Edward Herrmann and Grover C. Richman, for the Commission.

Application is made to this Board by the Union Railway, Gas and Electric Company and the Springfield Railway and Light Company, both organized under the General Incorporation Act of this state (Revision 1896, Comp. Stat., Vol. 2, p. 1596), for the approval in writing of a certain agreement of merger dated April 16th, 1917, duly entered into and signed by said corporations.

The petition was filed June 8th, 1917. Objection was filed by one stockholder.

Hearings upon notice were held June 26th, 1917, and October 4th, 1917. Testimony was taken, arguments heard and briefs filed.

The application is made under chapter 19, laws 1913 (P. L. 1913, p. 33), which in part provides:

"2. Before any merger of corporations can be made, the approval thereof in writing by the Board of Public Utility Commissioners of this State shall be obtained by said corporations and filed in the office of the Secretary of State with the names of the directors of each of said corporations which assent to the merger."

The merger of these corporations was effected under the provisions of the General Incorporation Act (cited *supra*, Comp. Stat., p. 1596). All statutory requirements in effecting the merger appear to have been complied with.

Both companies are engaged in the same or similar business, which consists of the purchasing, holding and sale of the stocks, bonds, mortgages, debentures, obligations or other evidences of indebtedness of railroads, street railways, electric railways, electric light, electric power, steam power, steam heat, hot water, fuel gas, illuminating gas, and mining corporations and other corporations of every kind.

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The Union Railway, Gas and Electric Company holds large amounts of bonds and notes and almost the entire capital stock of the Central Illinois Light Company, a corporation of the State of Illinois; Rockford Interurban Railroad Company, a corporation of the State of Illinois; Public Utility Company, a corporation of the State of Indiana; Janesville Traction Company, a corporation of the State of Wisconsin; DeKalb-Sycamore Interurban Traction Company, a corporation of the State of Illinois; Springfield Railway and Light Company, the joint petitioner herein. All of these companies excepting the Springfield Railway Company are utility companies owning and operating utilities.

The Rockford and Interurban Railway Company in turn owns practically the entire capital stock of the Rockford City Traction Company, which owns and operates a utility.

The DeKalb-Sycamore Interurban Traction Company also owns practically all of the stock of the DeKalb Sycamore Company which also operates a utility.

The Springfield Railway and Light Company, the joint petitioner herein, holds large amounts of the bonds and notes, and almost the entire capital stock of the following corporations: Springfield Consolidated Railway Company, and the Springfield Gas and Electric Company, both of which own and operate utilities.

Testimony was offered to show that none of the utilities operated by any of these companies are in competition.

It appears that the Union Railway, Gas and Electric Company owns the entire \$30,000 charges of stock issued by the Springfield Railway and Light Company excepting seven shares of stock which are owned by the directors of said company as qualifying shares.

The scheme of merger contained in the agreement submitted for approval, in effect, provides for the merging of the Springfield Railway and Light Company into the Union Railway, Gas and Electric Company. The identity of the Springfield Company as such is to cease and the stock of the said company is to be cancelled. No new stock of the surviving company, that is, the Union Railway, Gas and Electric Company, is to be issued. The Union Railway, Gas and Electric Company continues to exist with its

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corporate name, franchises, rights, immunities and organization intact; and its by-laws are to continue until changed or amended as therein provided. The number of directors of the surviving company continue to be seven, and the capital stock of the said Union Railway, Gas and Electric Company continues as at present, that is to say, \$18,000,000, divided into 180,000 shares of the par value of \$100; \$6,000,000 or 60,000 shares common stock, and \$12,000,000 or 120,000 shares preferred stock. The holders of preferred stock are entitled to receive when and as declared out of the surplus or net profits of the company dividends at the rate of 6% per annum payable as the Board of Directors may determine before any dividends shall be set apart for or paid upon the common stock, and shall be cumulative. The accumulation of dividends, however, are "non-interest bearing." No dividends are to be paid upon the common stock until all dividends upon the preferred stock, together with all accumulations, including accrued dividends to the date of payment of the common stock dividends shall have been declared and shall have been paid in full, or a sum sufficient for the payment thereof shall have been set apart for that purpose.

The agreement further provides the terms upon liquidation or dissolution, and also provides for the increase at any time of the capital stock of the company as therein set forth.

All property, real, personal and mixed, and all franchises, rights and immunities of the Springfield Railway and Light Company are to be vested in the Union Railway, Gas and Electric Company. The Union Railway, Gas and Electric Company is to cancel \$350,000 face value of notes payable of the Springfield Railway and Light Company, held by the Union Railway, Gas and Electric Company, and all contracts, obligations, liabilities and indebtedness of the Springfield Railway and Light Company, including \$4,175,000 face amount of collateral trust bonds of the Springfield Railway and Light Company to the Columbia Finance and Trust Company of Louisville, Kentucky, trustee. All shares of the capital stock of the Springfield Railway and Light Company are to be cancelled and delivered to the said company.

The application is made under Section 2, Chapter 19, Laws 1913, above quoted.

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It thus becomes the duty of the Board not only to ascertain whether the statutory requirements to effect the merger have been complied with, but also to ascertain whether there have been violations of any of the statutes of this State, or any of its prohibitions disregarded.

In effect, the merger or consolidation of corporations is the organization of a new corporation, and is subject to all of the limitations imposed by law. It appears that the two petitioning corporations are engaged in similar businesses, as contemplated by the statute. The Union Railway, Gas and Electric Company, as has been indicated above, holds practically the entire capital stock of the Springfield Railway and Light Company. This stock heretofore acquired is to be cancelled, and the holders of the Springfield Railway and Light Company assumed by the Union Railway, Gas and Electric Company, and such of these obligations as are owing by the Springfield Railway and Light Company to the Union Railway, Gas and Electric Company are to be cancelled. The present stock issued and outstanding of the Union Railway, Gas and Electric Company is not to be increased by the merger agreement, and no new stock is to be issued by the Union Railway, Gas and Electric Company to acquire the property, franchises, powers and privileges of the Union company.

The sole purpose as announced by counsel for the petitioners, in effecting the merger, was for the simplification of accounts, and to save taxes.

Chapter 15 of the Laws of 1915, amending Section 49 of the Corporate Act, provides as follows:

(1) "Any corporation formed under this act may purchase property, real and personal, and the stock of any corporation, necessary for its business, and issue stock to the amount of the value thereof in payment therefor, subject to the provisions hereinafter set forth, and the stock so issued shall be full paid stock, and not liable to any further call; and said corporation may also issue stock for the amount it actually pays for labor performed.

"Provided, that when property is purchased the purchasing corporation must receive in property or stock what the same is reasonably worth in money at a fair, bona fide valuation; *and provided further*, that no fictitious stock shall be issued; that no stock shall be issued for profits not yet earned, but only anticipated; *and provided further*, that when stock is issued on the basis of the stock of any other corporation it may purchase, no stock shall be issued thereon for an amount greater than the sum it actually pays for such stock in cash or its equivalent; *and provided further*, that the property purchased

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or the property owned by the corporation whose stock is purchased shall be cognate in character and use to the property used or contemplated to be used by the purchasing corporation in the direct conduct of its own proper business; and in all cases when stock is to be issued for property purchased, or for the stock of other corporations purchased, a statement in writing, signed by the directors of the purchasing company or by a majority of them, shall be filed in the office of the secretary of state, showing what property has been purchased, and what stock of any other corporation has been purchased, and the amount actually paid therefor."

This Act, together with Chapters 13, 14, 16, 17, 18 and 19, construct a group of Acts indicating a public policy to be followed in this State.

This Board, *In re Merger American Malt Corporation et al.*, Public Utility Reports, Vol. 2, page 401, at page 403, stated generally what it conceived its duty to be in cases of merger or consolidation presented to it for its approval:

"In general, therefore, the Board is of the opinion that, inasmuch as formal approval by a state tribunal is now, of necessity, a requirement in the case of every merger, the company resulting from such merger may properly be required to show at the time of merger, (1) assets behind its securities in amount sufficient to conform with the requirements imposed by the state upon companies newly incorporating under its laws; (2) that such merger must not by any of its terms subject any security holder in any of the consolidating or merging companies to an unfair or inequitable condition or arrangement; (3) that in the carrying out of such merger it must be affirmatively shown that each and every statutory requirement applicable in the premises has been complied with."

While under the proposed scheme of merger no new stock is to be issued, we are of the opinion that we are required to ascertain whether the requirements to justify the approval of the merger are shown. If we are right in the opinion that the resulting corporation is in effect a new corporation, surely we should have to ascertain whether or not the assets behind its securities are in amount sufficient to conform with the requirements imposed by the State upon companies newly incorporated; and we should also be satisfied that such merger must not by any of its terms subject any security holder in any of the consolidating or merging companies to an unfair or inequitable condition or arrangement.

The petitioners presented some proof as to the value of the assets of the resulting corporation, but requested opportunity to

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present further proof if the Board concluded that the capitalization of the resulting company was a matter to be passed upon by the Board in this proceeding.

Such opportunity will be afforded at an early date.

Sufficient testimony has not been presented to satisfy the Board that the merger would not by its terms subject any security holder to an unfair or inequitable condition or arrangement.

Counsel for the petitioners practically admit the insufficiency of testimony, but seek to distinguish the present application from the American Malt Corporation merger (*supra*), in that, in the American Malt Corporation case (*supra*) there was a consolidation of companies, while in the present case there is a merger of companies, and urged this difference to be that in the one case there was a losing of the corporate identity by one of the corporations by merger into the other, and the continuing corporate identity of the other; that no new corporation was created, and that in a consolidation the result is different, the companies consolidated losing their corporate existence and the new corporation being created in its stead, the stock of the companies consolidated dying with the death of the two consolidating corporations, and the consolidation agreement providing for the issue of new stock by the new company created by the consolidation.

A comprehensive brief was presented by counsel for the petitioners, and we have examined the same and the authorities therein referred to. We conclude that there is no force to this contention.

Noyes, in his work on intercorporate relations, at page 13, distinguishes the two terms as follows:

"a. Two corporations may be combined by their fusion into a third corporation created in their stead. This results in the surrender of the vitality of the old corporations, the extinguishment of their special privileges and exemption, and the springing into existence *eo instanti* of a new corporation with such powers and privileges as may be conferred upon it by the act authorizing the consolidation. The dissolution of all the old companies, and the creation of the new one are the essential features of this process.

"b. There may be an absorption of one company by another whereby the former is dissolved and passes out of existence, while the latter continues to exist with enlarged powers. The word 'consolidation' has been said to be inapplicable to a union of this character *but such use of the term is general and is supported by the highest authorities.*"

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Again at page 16 he says:

"The word 'merger' is used in statutes authorizing the union of companies to describe the process whereby the property and franchises of one or more companies are absorbed by another which continues in existence with original powers and with additional rights and privileges derived from the others. This is a process of absorption to which, as has been noted, the term 'consolidation' is generally applied, but to which the term 'merger' is equally appropriate. In fact had the word 'consolidation' been used only to describe the process of fusion, and the word 'merger' been applied to the process of absorption, confusion would have been avoided."

The language of the Act P. L. 1893, page 121, permitting the consolidation and merger of companies provides:

"that any two or more companies, organized or to be organized under any law or laws of this state for the purpose of carrying on any kind of business of the same or similar nature, may merge or consolidate such companies into a single corporation, which may be either one of said merging or consolidating companies or a new corporation to be formed by means of such merger and consolidation."

It is apparent from the language used that the terms merger and consolidation are interchangeable, and are used as describing the process and naming the result. In effect, however, a new corporation is formed. Whether new stock is issued or not is a detail of the scheme of merger or consolidation, and the possibilities of the scheme are too numerous to indicate, but all of these possibilities are present in either case of merger or consolidation.

Our courts in construing the Act have indiscriminately used the words "consolidation and merger" in the leading cases in this State, and while the terms were not before the court for distinction, we are of the opinion in reading the opinions of the court in the following cases, that the distinction urged by the petitioners does not exist in this State.

Colgate v. U. S. Leather Co., 73 N. J. Eq. 72; 67 Atl. Rep. 657; 75 N. J. Eq. 229; 72 Atl. Rep. 126.

N. J. & H. R. Railway and Ferry Co. v. American Electric Works, 81 Atl. Rep. 989.

Wm. B. Riker & Son Co. et al. v. U. S. Drug Co., 82 Atl. Rep. 930.

American Malt Corporation et al. v. Board Public Utility Commissioners et al., 92 Atl. Rep. 362.

Dated January 23d, 1918.

Establishing Standards, &c.—Utilities Engaged in Production, &c., of Gas.

No. 507.

IN THE MATTER OF ESTABLISHING STANDARDS AND REGULATIONS
TO BE FOLLOWED BY UTILITIES ENGAGED IN THE PRODUCTION,
SALE AND DISTRIBUTION OF GAS.

MODIFICATION OF ORDER.

On the twenty-fourth day of January, nineteen hundred and eighteen, the Board received a telegram from the Army Ordnance Department of the United States Government, signed by Lieutenant-Colonel Burns, of said department, which read as follows:

"Existing confusion in railroad facilities and commandeering of oil tank steamers for navy use has caused a shortage in oil supply to gas companies in Newark, Paterson, Trenton and Jersey City. These companies have found it necessary to shut down toluol plants as they cannot operate and meet the state standard for gas quality. It is imperative that toluol produced by these plants be available for use by the government in making explosives. Urgently request that you grant tolerance of thirty B. T. U.'s in gas standard for thirty days for territory supplied by gas from these companies, with proviso that all toluol be available for government use."

On receipt of this telegram the Board fixed Saturday, January 26th, 1918, 10:30 A. M. as the time, and the State House, in the City of Trenton, as the place for hearing on the question whether its order establishing standards and regulations to be followed by utilities engaged in the production, sale and distribution of gas should be modified as requested, and gave due notice of such hearing.

Said hearing having been held, and it appearing to the Board that its order should be modified in certain particulars as the same applies to the Public Service Gas Company, the Board

HEREBY ORDERS AND DIRECTS that Rule IX., contained in its order, adopted October 17th, 1911, establishing standards and regulations to be followed by utilities engaged in the production, sale and distribution of gas shall be modified so that gas produced by the Public Service Gas Company at its plants in Newark, Paterson, Trenton, Jersey City and Camden, shall have a monthly

Morris County Traction Co.—Change in Schedule.

average total heating value of not less than 570 B. T. U., with a minimum which shall never fall below 550 B. T. U.

The intention of this order is to permit the Public Service Gas Company to manufacture, during a period when an adequate supply of oil does not appear to be available, toluol for the use of the United States Government, and it is understood that the toluol produced at the company's plants shall be supplied to the said Government.

This order shall become effective immediately, and shall remain in effect for a period of thirty days from the date hereof.

Dated January 26th, 1918.

No. 508.

IN THE MATTER OF THE APPLICATION OF MORRIS COUNTY TRACTION COMPANY TO CHANGE SCHEDULE ON LINE FROM SPRINGFIELD JUNCTION TO ELIZABETH.

Application is made for a modification of an order made April 7th, 1914, requiring certain half-hourly interurban service to be afforded by an electric railway. *Held:*

1. The elimination of the trips as requested will result in an appreciable saving of fuel now being consumed for the operation of the cars on this line.

2. In view of the fact that the trips which it is proposed to discontinue are all well within the non-rush periods; that in an emergency like the one now existing every means for conservation of fuel and labor consistent with a reasonably adequate service should be adopted, the Board is of the opinion that during the period of extreme coal shortage its order should be modified.

King & Vogt, for the Morris County Traction Company.

John K. English, for the Townships of Springfield and Union.

Corra N. Williams, for the City of Summit.

On April 7th, 1914, this Board filed an order requiring the Morris County Traction Company to run its cars every half hour

Morris County Traction Co.—Change in Schedule.

between 6 o'clock A. M. and 11 o'clock P. M. each day from Maple Street, Summit, through the Township of Union to the Central Railroad Station, in Elizabeth. The Board is now asked by the Morris County Traction Company to be permitted to withdraw some cars now operated between Springfield Junction and Elizabeth on a half-hour schedule.

This application was placed on the Board's calendar for hearing and notice thereof was given to the petitioner, the Townships of Springfield and Union and the City of Summit. At such hearing testimony was submitted by the Morris County Traction Company as to the number of passengers carried on all trips from January 1st to January 5th, 1918. This information has been summarized and averaged as indicated in the tabulation which is attached hereto. On this tabulation will also be found figures (shown in parentheses) which indicate the number of passengers carried on all trips January 17th, 1918, which information has been secured from the company subsequent to the hearing by the inspector making the investigation. These figures are not used as a basis for the conclusion reached, but are informative only. The record for January 17th is submitted, for the reason that the weather on that date was mild and the question of weather conditions was brought up at the hearing by the attorney representing patrons of the line. This attorney stated that he did not consider the figures submitted by the company a fair average, for the reason that the weather conditions on the dates for which the information was submitted were abnormal, the temperature being very low on these days. Reference to the table will indicate that the traffic on January 17th compared very favorably with the average for the first five days in January.

Referring to the table, terms "Car Out" and "Following Car" refer, respectively, to the trip which the company desires to eliminate and the trip immediately following, which, with the four exceptions, is thirty minutes later. These exceptions are in the case of trip No. 504, the following trip being twenty-eight minutes later; trip No. 508, the following trip being nineteen minutes later; trip No. 503, the following trip being nineteen minutes later, and trip No. 509, the following trip being twelve minutes later.

Morris County Traction Co.—Change in Schedule.

Reference to the last column of the table will show that, assuming the passengers who are now taking the car to be eliminated would take the following car, but six of the latter cars would be loaded beyond the seating capacity of the car. This is on the assumption, also, that the total number of passengers carried on the trip would all be on the car at one time. As a matter of fact, this is seldom the case as there is more or less local travel between the termini of the line in question. It will also be noted that the greatest number of passengers carried on one car on any one of the first five days in January is less than the seating capacity of the car with one exception.

A careful study of the situation, including personal observation in a number of instances of the actual number of passengers carried on several of the trips which the company desires to eliminate, has been made by the Senior Traffic Inspector of the Board, and the information obtained was submitted at the hearing.

The elimination of the trips as requested in the petition will result in an appreciable saving of fuel now being consumed for the operation of the cars on this line. After a careful investigation of this matter by the inspector, he testified that a saving of from one to two tons of coal per day will result, the latter figure being probably more nearly correct, particularly in view of the fact that much of the coal which the Milburn Electric Company, which furnishes power for this line, is receiving, and is likely to receive for some time to come, is of an inferior quality.

The service it is proposed to withdraw is practically an inter-urban operation differing essentially from urban service. In view of the fact that the trips which it is proposed to discontinue are all well within the non-rush periods; that in an emergency like the one now existing every means for conservation of fuel and labor consistent with a reasonably adequate service to the public should be adopted, the Board is of the opinion that during the period of extreme coal shortage, its order of April 7th, 1914, should be modified in the following particulars:

1. That the following trips, as indicated on the tabulated statement submitted by the Morris County Traction Company at the hearing on January 18th, 1918, be eliminated from the present schedule until otherwise ordered by this Board: 501, 507, 519, 523, 527, 531, 535, 539, 559, 563, 567, 571, 502, 506, 520, 524,

Morris County Traction Co.—Change in Schedule.

528, 532, 536, 540, 560, 564, 568, 572—539, 559, 540 and 560 to be retained on Saturdays.

2. That for at least two days previous to the change of schedule as indicated above, notices be conspicuously posted in the cars indicating the proposed change in schedule and the date on which the same shall become effective.

MORRIS COUNTY TRACTION COMPANY.

Average for 5 days, January 1st-5th, 1918, inclusive. Seating Capacity of Cars, 42.

Car Out.		Average Passengers per Car per Day.		Greatest Number Passengers Any Day.		Average Total Passengers Who Would Take Following Car.	
Train No.	Time.	Car Out.	Following Car.	Car Out.	Following Car.		
501.....	5.45 A.M.	(4) 5	(8) 5	7	7	(12) 10	} From Elizabeth
*507.....	6.45 A.M.	(0) 1	(32) 14	1	20	(32) 15	
519.....	9.27 A.M.	(15) 12	(12) 15	20	27	(27) 27	
523.....	10.27 A.M.	(14) 15	(12) 15	15	30	(26) 30	
527.....	11.27 A.M.	(10) 21	(16) 15	29	26	(35) 36	
531.....	12.27 P.M.	(11) 20	(23) 22	36	45	(34) 48	
536.....	1.27 P.M.	(12) 21	(7) 19	25	27	(19) 40	
†539.....	2.27 P.M.	(19) 25	(29) 25	37	37	(48) 50	
†559.....	7.27 P.M.	(19) 26	(13) 15	35	30	(32) 41	
563.....	8.27 P.M.	(15) 16	(15) 16	32	35	(30) 32	
567.....	9.27 P.M.	(19) 12	(10) 16	20	36	(29) 28	
571.....	10.27 P.M.	(27) 15	(16) 19	36	38	(37) 34	
502.....	5.31 A.M.	(0) 0	(31) 31	0	33	(31) 31	} From Springfield
*506.....	6.10 A.M.	.. ..	(71) 54	0	65	(71) 54
520.....	8.59 A.M.	(23) 39	(25) 14	31	17	(48) 53	
524.....	9.59 A.M.	(7) 21	(25) 21	34	27	(32) 42	
528.....	10.59 A.M.	(10) 18	(23) 20	25	28	(33) 40	
532.....	11.59 A.M.	(12) 21	(12) 19	33	23	(24) 38	
536.....	12.59 P.M.	(35) 19	(36) 22	28	28	(71) 41	
†540.....	1.59 P.M.	(16) 28	(30) 21	36	28	(46) 49	
†560.....	6.59 P.M.	(23) 24	(30) 25	45	40	(53) 40	
564.....	7.59 P.M.	(11) 10	(1) 12	16	32	(12) 22	
568.....	8.59 P.M.	(11) 8	(10) 9	13	23	(21) 17	
572.....	9.59 P.M.	(11) 12	(5) 7	46	16	(16) 19	

* Sunday only.

† Not off on Saturday.

NOTE.—507 ran January 1st, holiday.

Figures in parentheses are for January 17th, a mild day.

MODIFICATION OF ORDER.

This case having been duly heard and submitted by the parties, and full investigation of the matters and things involved having been had, and the Commission having, on the date hereof, made and filed a report, containing its findings of fact and conclusions

Clayton-Glassboro Water Co.—Approval of Rates.

thereon, which said report is hereby referred to and made a part hereof, the Board of Public Utility Commissioners

HEREBY ORDERS AND DIRECTS that its order dated April 7th, 1914, becoming effective April 27th, 1914, shall, until further change by the Board, be modified so as to permit the withdrawal from service of certain cars referred to by number in the report of the Board hereinbefore referred to.

This order shall become effective at once.

Dated January 26th, 1918.

No. 509.

ON THE PETITION OF THE CLAYTON-GLASSBORO WATER COMPANY FOR THE APPROVAL OF A NEW SCHEDULE OF RATES—
REHEARING.

1. A water company, not supplying satisfactory service, and denied permission to increase its rates, was given such permission on rehearing, it appearing that since the original hearing substantial sums had been spent to improve the service.

2. A minimum charge of \$3.00 per quarter, payable in advance, is applicable to all customers whether charged on metered or fixture service.

3. For water for fire protection a fixed charge per inch diameter per foot of mains is allowed plus \$6.00 per annum for each hydrant in service and \$7.50 for each hydrant added in the future.

J. Fithian Tatem, on hearing and rehearing, for the petitioner.

Francis B. Davis, on hearing and rehearing, for the Borough of Clayton.

S. Huntley Beckett, on hearing, for the Township of Glassboro.

Samuel W. Warwick, on hearing, for Glassboro Citizens' Committee.

J. C. Potter, on hearing, for Clayton Citizens' Committee.

 Clayton-Glassboro Water Co.—Approval of Rates.

The original petition in this matter, filed on January 18th, 1916, proposed to be effective on April 1st, 1916, contained the following schedules for water served through metered service:

"All water will be supplied through meters which will be furnished and owned by the company.

"Size of meter to be installed for all houses to be optional with the company.

"The minimum quarterly charge to all consumers will be \$5.00, payable in advance, for which the use of 6,250 gallons will be allowed.

"All water used in excess of 6,250 gallons per quarter will be charged for at the following rates:

"For the first 18,750 gals. used within the quarter,	40c. per M. gals.
" " next 25,000 " " " " "	35c. " " "
" " " 25,000 " " " " "	30c. " " "
" all over 75,000 " " " " "	25c. " " "

"Fire hydrants—public or private—per year for each hydrant, payable quarterly in advance..... \$50.00"

(Note: Remainder of schedule not here quoted.)

A set of rules and regulations was filed at the same time.

Hearings on the original petition were held on February 24th and on March 24th, 1916, and testimony was submitted on behalf of the petitioner, objectors and the Board, briefs submitted by counsel and the matter taken into conference.

Within a few days thereafter complaints were received from consumers that the service rendered by the company was "grossly inadequate." It was found that these complaints were based on fact and on April 2d, 1916, the Board dismissed the application for increases in rates with permission to renew the same later if the company so desired, with the provision that the record of the original hearings might be used on the rehearing if it seemed desirable to do so.

On October 23d, 1917, the Clayton-Glassboro Water Company, through its counsel, filed a petition for a rehearing of the matter on the allegation that "since the date of the said report your petitioner has expended a considerable sum of money in repairs and improvements to its plant, and believes it has rendered during the summer months adequate and proper service." The petitioner further alleges that its taxes in both municipalities served had been very materially increased and that "during the past year the expenses of operation, particularly in the matter of coal, have very substantially increased."

Clayton-Glassboro Water Co.—Approval of Rates.

CORPORATE HISTORY.

The Borough of Clayton Water Company was incorporated March 27th, 1895, and the Township of Glassboro Water Company was incorporated August 26th, 1896, and began the service of water in 1896. They were organized and have been financed and the plants constructed, extended and operated under the general management and supervision of the American Pipe and Construction Company and interests identified with that company, the latter company is now in the hands of a receiver and it is alleged that it can no longer assist the petitioner financially.

On March 10th, 1895, the Borough of Clayton Water Company entered into a contract with the Borough of Clayton covering pressure, rates and services to be rendered the Borough in lieu of taxes. This contract expired March 30th, 1915. On June 8th, 1896, a similar contract was executed by the Township of Glassboro Water Company and the Township Committee, which expired on June 8th, 1916.

Pursuant to an agreement entered into on April 24th, 1901, the two companies were merged under the title of the Clayton-Glassboro Water Company, which continued to operate under the above cited contracts up to their expiry.

FINANCIAL HISTORY.

According to Exhibit P-6, the original plant, built in 1895 and 1896, cost by the books \$103,089.65. This was paid for by bonds to the total amount of \$200,000, par value, and by the issue of \$300,000 par value of stock.

On April 24th, 1901, as above stated, the two companies merged; deficits in interest, computed at 5 per cent. compounded, had been met by the issue of bonds, so that at the time of the merger the securities of the merged companies were exchanged for bonds of the new company in the amount of \$241,800, under a mortgage for the principal sum of \$250,000, and stock in the amount of \$300,000, making a total of \$541,800 in securities now outstanding. The book value of the property at the time of the merger approximated \$109,000, excluding deficits and develop-

Clayton-Glassboro Water Co.—Approval of Rates.

ment cost. Subsequent to the creation of this Board the company petitioned it to validate an issue of \$8,200 bonds, but this petition was dismissed because the Board did not approve the purpose for which the bonds were issued.

DEVELOPMENT.

It is evident that the promoters of this enterprise expected a much larger growth in the population of this territory than has actually occurred. On any other theory the original investment would appear too large, or the rate schedule too low to justify the original cost of construction of the plant. This will become apparent from summarizing the ex parte Exhibit P-6, which represents book figures of investment and operating revenue and expenses plus 1 per cent. for an annual amortization charge (not carried into the books, however) to provide a reserve for replacements. This is shown in Table I.

TABLE I.

CLAYTON-GLASSBORO WATER CO.

Result of Operation from 1896 to 1914, Inclusive.

(1) Year.	(2) Plant at Dec. 31st.	(3) Operating Revenues.	(4) Operating Expenses (1).	(5) Net Revenue (2).	(6) Net Revenue in % of Capital.
1896	\$103,090	\$353	\$4,927	(\$4,574)	(4.43%)
1897	104,587	3,129	5,972	(2,843)	(2.71%)
1898	105,163	3,683	4,817	(1,134)	(1.10%)
1899	106,278	4,135	5,690	(1,555)	(1.46%)
1900	107,778	5,621	4,738	889	0.82%
1901	109,702	4,932	5,431	(499)	(0.45%)
1902	110,397	5,475	5,376	99	0.09%
1903	113,021	6,064	6,437	(373)	(0.33%)
1904	114,297	6,821	6,193	626	0.55%
1905	116,074	7,043	6,321	722	0.62%
1906	117,633	7,031	6,593	488	0.41%
1907	120,791	7,451	6,315	1,136	0.94%
1908	122,203	8,490	6,085	2,405	1.97%
1909	125,808	8,884	6,219	2,675	2.12%
1910	128,659	9,282	6,279	3,003	2.33%
1911	132,138	11,134	5,831	5,303	4.01%
1912	134,695	13,329	6,274	7,055	5.24%
1913	154,566	10,252	6,355	3,897	2.52%
1914	154,976	10,505	7,513	2,992	1.93%
Totals.....	\$2,281,906	\$138,674	\$113,362	\$20,312	0.89%

(1) Includes 1 per cent. per annum on capital to provide for replacements.

(2) Deficit from operation placed in brackets.

Clayton-Glassboro Water Co.—Approval of Rates.

The percentages in column (6), Table I., are based on the capital at the end of the year and on the setting aside of 1 per cent. of same as a depreciation fund. The capital should be taken at the middle of the year, but as the annual additions were nearly all small the difference is not great. On the other hand, if 1 per cent. had been charged to expenses each year, this would have created a reserve which should have been offset against capital in the petitioner's calculation, thereby decreasing the total at the end of each period. In Table I., however, the capital in column (2) includes accrued depreciation, so, taking book figures, each percentage in column (6) should be increased 1 per cent.

It is probable that the promoters of this enterprise based their calculations on the prosperity and expected growth of the glass industry in Clayton and Glassboro. In 1896 this trade was carried on by glassblowers, who received large wages. Since that time automatic glassblowing machinery has been invented and its installation in Glassboro and elsewhere has proved a success as a mechanical process, but has cut down the prosperity of the individual glassblowers, and their number, enormously; the glass company which operated in Clayton recently failed and the works ceased to operate. As a result the water company reached its maximum net revenue in 1911 and 1912, since which time its net revenue has declined, and in 1916 and 1917 the expenses, taxes and depreciation charge exceeded the revenue. This is an unhealthy sign if the company is to continue to supply water and the community is to continue to receive service from the company, especially as its controlling company is in the hands of a receiver and can no longer assist it financially.

BASIS FOR A FAIR RATE.

It is now pertinent to consider the elements entering into the cost of rendering this service in the light of the record submitted, supplemented, where necessary, by the company's annual reports filed with this Board.

- I. Capital, used and useful, on which a fair return is to be computed.
- II. Annual amortization appropriation to provide for replacements.
- III. Reasonable operating expenses, based on efficient management and taxes of all kinds.

Clayton-Glassboro Water Co.—Approval of Rates.

I. CAPITAL, USED AND USEFUL, ALLOCATED TO CLASSES OF SERVICE.

On page 10 of the testimony (first hearing) the total cost of the physical property, as of December 31st, 1914, was claimed by Mr. W. H. Roth, Secretary of the company, to be \$164,976.83, and the intangible property \$50,702.49, or a total of \$205,679.12 (book costs). The physical property includes \$1,955.40 of organization expenses, and the intangible property of \$50,702.49, includes the \$41,331.56 deficit in interest accrued up to the merger in 1901, \$8,233.93 discount on bonds issued prior to 1901 and interest adjustments of \$1,117. The total amount of \$50,702.49 is, therefore, unpaid interest or bond discount. In view of the disparity between the actual cost of the plant, as shown, and the bond issue, it would appear that these intangible items are not properly related to the tangible values on which based.

The company also submitted a development cost study purporting to be on the basis of book costs, with 6 per cent. interest compounded, 1 per cent. for depreciation annually and actual operating revenue and revenue deductions. As this exhibit, however, does not credit to a depreciation reserve the amounts so charged to expenses; and does not deduct such reserve as accumulated, concurrently from the physical capital, it is, in effect, a development cost study on the basis of 7 per cent. compounded annually. In view of the nature of the territory, and of the fact that practically a very large percentage of possible users have been attached to the system, it would appear that the judgment of the promoters was so materially at fault that this method of ascertaining the total amount of capital to be used as a rate base will not be of great assistance, for the reason that it will lead to rates far in excess of the value of the service rendered; if such rates were imposed many of the present users would return to wells and the interests of all parties would suffer.

The Board's engineer made a valuation of the plant and property of the petitioner based on the units shown by the records of the company, but on the basis of reproduction cost new, depreciated for life in service. This was submitted in Exhibit C-1.

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As of December 31st, 1914, it showed a cost to reproduce of \$153,912 (including \$1,955 organization expense and \$2,043 for property abandoned), and a present depreciated value of \$126,305. As a consideration of Table I. shows that none of the depreciation has been earned, it would appear reasonable to consider this as an intangible.

On the other hand, the company purchased, in 1913, a distribution system in Chestnut Ridge, much of which is not used and useful in view of the fact that a great deal of the mains do not serve any customers, and the average cost per customer actually served through mains so purchased is unreasonably high. The Board is not disposed to allow the amount paid for this in excess of the average per customer outside of this settlement, and therefore deducts from amount paid in this purchase a value new of \$13,320, or a present value of \$12,929, on which deduction the annual depreciation would be \$195. The amount of capital allocated to fire and domestic service and their sum will be found in Table II.

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TABLE II.

CLAYTON-GLASSBORO WATER CO.

Allocation of Capital (Used and Useful) to Classes of Service (Year 1914).

Acc. No.	Items.	Total Value New.	Domestic Use. Amount for Domestic.	Fire Use. Amount for Fire Purposes.
106	Reservations, land	\$440	\$389	\$51
109	Springs and wells } Land	455	402	53
109	Springs and wells } Wells	2,487	2,196	291
112	Gravity intakes and suction mains	751	663	88
121	Steam pumping station.....	5,598	4,943	655
134	Steam pumping station.....	3,268 (1)	2,886	382
122	Steam pumping power equip- ment	5,213	4,603	610
128	Stg. Res., tanks and standpipe,	17,622	11,807	5,815
129	Mains and valves.....	81,251	55,926	25,323
130	Services	5,065	5,065	.....
131	Meters	7,987	7,987	.....
132	Hydrants	5,996	.....	5,996
133	Fountains	284	202	82
135	General equipment	126	89	37
Fixed physical capital.....		\$136,543	\$97,158	\$39,385
152	Materials, supplies, working cap- ital	\$4,000	\$2,840	\$1,160
101	Organization expense	1,955	1,388	567
166	Property abandoned	2,048 (2)	1,808 (2)	240 (2)
		\$144,546	\$103,194	\$41,352
For additions, 1915-1917, and for other intangibles.....		5,464	3,896	1,558
Total capital taken.....		\$150,000	\$107,090	\$42,910

(1) Superintendent's residence at plant.

(2) Since replaced by new work.

II. The annual depreciation on the property shown in Table II., likewise allocated to classes, will be shown in Table III.

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TABLE III.

CLAYTON-GLASSBORO WATER CO.

Allocation of Annual Depreciation to Classes of Service (Year 1914).

<i>Acc. No.</i>	<i>Items.</i>	<i>Total Annual Depre- ciation.</i>	<i>Domestic Use. Amount.</i>	<i>Fire Use. Amount.</i>
108	Reservations .....	....	...	...
109	Springs and wells.....	\$112	\$99	\$13
112	Gravity intake and suction mains	25	22	3
121	Steam pumping station.....	55	49	6
134	Steam pumping station, supt...	58	51	7
122	Steam power pumping equip- ment	200	177	23
120	Sta. Res., tanks and standpipes,	162	109	53
129	Mains and valves.....	947	652	295
130	Services	167	167	...
131	Meters	188	188	...
132	Hydrants	120	...	120
133	Fountains	6	4	2
136	General equipment	5	3	2
		<u>\$2,045</u>	<u>\$1,521</u>	<u>\$524</u>
	For additions since 1914 take..	100	100	...
	Annual depreciation as of 1917,	<u>\$2,145</u>	<u>\$1,621</u>	<u>\$524</u>

III. Operating expenses as taken will be shown in Table IV.

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TABLE IV.

CLAYTON-GLASSBORO WATER CO.—OPERATING EXPENSES AND TAXES.

Based on 1917 Results Adjusted by Deduction of \$2,936 from Operating Expenses and the Addition of \$430 for Increasing Franchise Taxes.

<i>Items.</i>	<i>Total as Taken.</i>	<i>Allocated to Domestic Use.</i>	<i>Allocated to Fire Use.</i>
Collection and purification system....	\$94	\$83	\$11
Pumping system (includes superintendent's house)—			
For fuel	2,840	1,900	940
For other expense, etc.....	2,460	2,165	295
Reservoirs, tanks and standpipes....	503	443	60
Mains and accessories.....	1,765	1,553	212
Services and stops.....	123	123	...
Meters and boxes.....	325	325	...
Fire hydrants	345	...	345
Accounting and commercial.....	807	795	12
General and miscellaneous.....	891	683	208
Total expenses and taxes.....	\$10,153	\$8,070	\$2,083

NOTE 1: In the above table, taxes and insurance are allocated to the appropriate parts of the system. Taxes are taken at 2 per cent. of the value of the physical property and are adjusted for increases to be made by the terms of the Act. The total taxes taken for all purposes is \$2,723. This item indicated substantially \$2,000 increase over taxes prior to 1915.

NOTE 2: The sum of \$2,936 is deducted from Operating Expenses shown by the company for the reason that the figures are abnormal and a larger portion should be taken care of by the depreciation reserve.

In Table V. are assembled three elements on which to base the conclusion as to an adequate revenue on the assumptions hereinbefore made, and on the further assumption that under the present circumstances 6 per cent. is to be earned on the capital used and useful as shown by Table II.

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TABLE V.

CLAYTON-GLASSBORO WATER CO.

Total Revenue Indicated by Tables II., III. and IV. on the Basis of 6 Per Cent. on Capital Used and Useful.

	<i>Total.</i>	<i>Allocated to Domestic.</i>	<i>Allocated to Fire Use.</i>
Capital by Table III.....	\$150,000	\$107,000	\$42,910
6 per cent. on capital.....	\$9,000	\$6,425	\$2,575
Annual depreciation, Table III.....	2,145	1,621	524
Operating expenses and taxes, Table IV	10,153	8,070	2,083
Total revenue	\$21,298	\$16,116	\$5,182

The revenue shown in Table V. will now be compared with the revenue which would have been produced by the proposed schedule.

On page 22 of the testimony (hearings of the original petition) Mr. Roth stated that the revenue which the proposed rates would have produced in 1914 from sales of water would have been \$17,728.53, as estimated by him, and more fully shown in detail in Exhibit P-8. This is predicated on a hydrant revenue of \$5,700; Table V. indicates a hydrant revenue of \$500 or \$600 less; this reduces the \$17,728.53 by that amount.

On page 36 of the testimony, on the rehearing, Mr. Roth stated that about twenty-five new customers had been added to the system and that he estimated that the revenue might have been increased \$1,000 to \$1,500, since then. Taking the mean of the two estimates would indicate a revenue of approximately \$19,000 for 1917. The difference in hydrant rental above referred to would likewise reduce this to about \$18,500. Comparing this with the total revenue of \$21,298, indicated by Table V., shows a shortage of approximately \$2,800. In view of the increase of about \$2,000 in taxes, about \$1,250 in the cost of fuel and increases in labor, a revenue of \$18,500 does not appear to be unreasonable during these times. Even if the capital basis for rates were reduced to \$125,000, as suggested by counsel, the \$21,298 would be reduced

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by \$1,500 to about \$19,800 which still exceeds \$18,500 by \$1,300; and if the company be criticised for the comparatively large amount of water “unaccounted for,” and a reduction of one-third of the coal used (Table IV., coal, \$2,840), the reduction of about \$950 would still indicate that the revenue of \$18,500 was not unreasonable, in view of the premises.

An examination of the proposed schedule, however, shows that it is not properly balanced if the foregoing analysis be correct.

FIRE CHARGES.

Following the precedent established by this Board in the investigation of the rates of the Hackensack Water Company (see report dated April 28th, 1917), the analysis therein showed (report, p. 35): “The fire costs are largely fixed. These costs should be met by charges based on the proportion of plant and system required for protection, exclusive of hydrants, and an additional charge for each hydrant. The first element in this charge is proportional to the inch-feet of main in the piping system. By inch-feet is meant the product of the length of a main by the nominal diameter in inches, thus, one foot of six-inch main is equivalent to six inch-feet.”

In the instant case the allocation to fire service has been made on the “excess plant” theory and not on the “proportional plant” theory used in statistics introduced by the petitioner to justify hydrant rentals of \$50 and upwards. The latter theory will always require that a larger percentage of total revenue be allocated to fire use because it assumes that two plants are to be built, one for domestic supply and the other for fire services. The percentage that each bears to the sum of the costs of the two combined is allocated “proportionally” to each service.

On the theory followed in this report the excess cost incurred for 1917, by reason of fire service being rendered, is \$5,182. As shown in the Hackensack case, and as may be shown in the instant case, the average cost of a hydrant per annum for interest, depreciation and maintenance has, in normal times, been \$6. The 114 hydrants in use (P-8) should, therefore, produce a revenue of \$684; this, deducted from the total revenue of \$5,182, shown in Table V., leaves \$4,498 as a fixed charge on the system of mains

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as installed in 1914. The inch-feet of mains (after excluding those too small to serve for fire purposes) were 552,170. This indicates an inch-foot charge of eight-tenths of a cent per inch-foot of main. As of December 31st, 1914, to Clayton is allocated 224,576 inch-feet which, at 0.8 cents a foot, indicated a fixed charge of \$1,797, to which is to be added 50 hydrants at \$6 a year, or \$300. Clayton, then, should pay \$2,097 per annum upon the installations in place December 31st, 1914, with the privilege of adding any number of hydrants to the mains in place December 31st, 1914, at the rate of \$7.50 each (present annual carrying charges), or withdrawing any number and securing a reduction of \$6 each per annum. This \$7.50 is to continue during the period of abnormal war costs, and until costs return to those prevailing in 1915. In the same way to Glassboro is allocated 327,504 inch-feet of main which, at 0.8 cents per inch-foot, gives a fixed charge of \$2,621 for the mains in place December 31st, 1914. Adding 64 hydrants at \$6 per annum, aggregating \$384, gives a total charge of \$3,005 per annum with the same privilege above stated. Mains 6 inches and larger, which may be added to those installed in either municipality, as of December 31st, 1914, should cause an addition to the fixed charge to the municipality in which laid of eight-tenths of a cent per inch-foot of main so added to the system.

It is expected that this form of rate will permit and induce the municipal authorities to add a sufficient number of hydrants to reduce the spacing of hydrants in a manner tending to more efficient utilization of pressures furnished. At ordinary heads maintained in this water system, hose lines should not exceed 200 or 250 feet in length, which indicates a hydrant spacing of about 400 to 500 feet where fire protection is required.

MINIMUM BILLS FOR DOMESTIC SERVICE.

The principal objections of counsel were directed to the amount of the proposed minimum bill. Table V. indicates that the revenue required under present conditions to meet the assumptions made is \$16,116. The proposed schedule would provide \$13,300 by the petitioner's estimate given above (\$19,000, less \$5,709, for hydrants). If all the customers paid only the minimum bill of

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\$12 proposed, the revenue produced thereby would be about \$10,200, leaving some \$3,100 to be derived from the sales to larger customers over and above the \$12 minimum exceeded by them.

The following companies in South Jersey charge a minimum of \$12, or more:

Delaware River Water Company, Riverside and Beverly.....	\$12
Pennsgrove Water Company.....	15
Riverton and Palmyra Water Company.....	12
Sewell Water Company.....	15
Westville and Newbold Water Company.....	12
Woolwich Water Company, Swedesboro.....	12

There are, of course, other companies in the state which charge, some lower and others equal or higher minimums than \$12.

In view of the record in this case, it appears that a minimum of \$12 would not be unreasonable for domestic customers using $\frac{5}{8}$ -inch meters or for those paying fixture rates. The latter should be metered as rapidly as may be done in order to avoid waste and discrimination. A larger minimum should be provided for customers who require larger than $\frac{5}{8}$ -inch meters.

SERVICE.

The original petition in this matter was dismissed, for the reason that the service rendered by the company was not adequate or proper, and further, that "a fair return upon investment is predicated upon adequate and proper service. The duty to supply service is an absolute and not a relative one. The duty imposed by law is to furnish safe, adequate and proper service, and it is for such service only that the company is entitled to fair and reasonable rates yielding fair returns to the owners of the property upon their investment therein."

The Board, accordingly, denied the petition with leave to renew later if the company should desire.

Eight or nine months have intervened; the company has spent substantial sums to make its service safe, adequate and proper. No complaint against the company appears to have been filed for some time prior to the rehearing. During the rehearing complaint was made by the objectors on the ground that a fire occurred in

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the Moore homestead at about 4:30 A. M. of November 14th, 1917, and that the water pressure was wholly inadequate to successfully combat the fire. At the request of the Board's engineer, pressure charts taken at the plant, a few hundred feet distant, were submitted for inspection by the Board's engineer and by him forwarded to objectors' counsel. These indicated that the pressures during the whole period of the fire exceeded 50 pounds per square inch. This pressure should have been adequate, especially as the hydrant was located on the eight-inch main leading directly from the plant. It would appear, then, that the service rendered is now fairly satisfactory, notwithstanding the fact that some of the plant equipment is not efficient.

The Board, therefore, finds and concludes:

1. That (a) the schedule of rates for water supplied through meters will be permitted to be filed, effective as of January 1st, 1918; (b) the minimum quarterly bill of \$5, payable in advance, is applicable to all customers, whether served on metered or fixture service.

2. That the schedule of rates for water for building purposes will be permitted to be filed without approval and subject to the protest of any interested party.

3. That rates for special services will not be approved as submitted, for the reason that making a charge for tapping mains is not consistent with the "Rules, Regulations and Recommendations for Water Utilities," issued by this Board and now effective.

4. That the schedule of rates for Fire Hydrants is disapproved, for reasons above cited, with permission, however, to the petitioner to submit a schedule of rates in conformity with the foregoing report, effective January 1st, 1918, as follows:

Fire Hydrants.

Rates for fire protection are made up of two parts—a fixed charge and a charge for each hydrant.

Fixed Charge.

Eight-tenths of a cent per inch diameter per foot of mains applicable to all distribution mains, as shown in this report, as of December 31st, 1914, to 6-inch mains and larger laid in future

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and to only such short lengths of 4-inch laterals as will provide 40 pounds pressure at the hose connections; this charge is applicable also to transmission mains serving a particular community. The fixed charge allocated to the Borough of Clayton, as of December 31st, 1914, is \$1,797; the charge allocated to the Township of Glassboro, as of December 31st, 1914, is \$2,621.

Hydrant Charge.

Six dollars per annum for each hydrant in service January 1st, 1917, and \$7.50 for each hydrant which may be added thereafter, until conditions of cost shall return to those prevailing in 1915.

5. That the "Rules and Regulations" as filed are disapproved with permission to submit for approval "Rules and Regulations" not contravening the provisions set forth in the "Rules, Regulations and Recommendations for Water Utilities," effective March 10th and June 21st, 1917.

Dated January 29th, 1918.

No. 510.

NATHAN MYERS

v.

PUBLIC SERVICE ELECTRIC COMPANY.

Nathan Myers, for the petitioner.

L. D. H. Gilmour, for the respondent.

Complaint was submitted by Nathan Myers, as party in interest and representing the Court Theatre, of Newark, of interruption of electric service for said theatre. On this complaint hearing was held of which due notice was given. It is claimed there

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have been interruptions in the electric service at the Court Theatre for some time past; that complainant has taken the matter up with the respondent, the Public Service Electric Company, a number of times, both during the time when the premises were leased by others, and since then, when he has operated the theatre. The complainant also claims that several years ago when he took the matter up with the respondent, he was advised that if he would place a double throw switch on the meter board and run an independent line to the outside of the building, the company would run independent service to the building from an out-of-town plant—petitioner believing that the plant referred to was the Marion plant.

It appears that the secondary service was installed and the petitioner went to the expense of about \$100 installing the double throw switch; that the secondary service was connected, apparently by mistake, on the same circuit as the main service, which error was subsequently corrected, and, consequently, that for some time past the theatre has been connected with two separate service circuits. Petitioner claims that there are still interruptions in the service and that frequent complaints have been made to the Public Service Electric Company of this condition.

Respondent claims that petitioner was never advised by respondent's representative that he would be given secondary service from the Marion plant; that transmission lines run from the Marion plant and from Essex station to City dock station, at Newark, at 13,000 voltage, where it is transformed for distribution to 2,400 voltage, and distributed to consumers in Newark.

Respondent further claims that the cost would be prohibitive to give petitioner special service from either the Marion plant or the Essex station plant, and that the cost would run into several thousand dollars; that no one has ever requested service of this character; and further, that double service on two different circuits, such as has been given the petitioner, is very frequent.

The company also claims that very little of the interrupted service comes from difficulty with local distribution, but, instead, in the station, or with transmission lines, and that when there is trouble in the transmission line between the Marion plant and the City Dock station, or Essex station and the City Dock station, it

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takes from one to two to three minutes to switch the transmission service from one line to another, which is the cause of most of the interrupted service, and which cannot be avoided.

Although not embodied in the complaint, petitioner testified that he has a motor generator set to give the light to the motion picture machines; that this set is operated by A. C. through a five-horse power A. C. motor, running a D. C. generator; that if he could have the pictures going while the house is in darkness, it would keep the people quiet when the lights are off; and that this could be made possible by changing the A. C. motor to D. C. motor, because there is D. C. in the building, and the line in the building is large enough to carry the additional five-horse power for that generator set; that the change could be made so that they could get light through D. C. at a time when the house lines are off, or in case anything happened to a motor generator set, they could have A. C. for light. The petitioner, therefore, claims that the Public Service should change the generator set to have it run by D. C. instead of A. C. He was informed by the company that he could have the change made at his own expense, but would be billed the same rate as A. C.

In reference to the claim of interrupted service, it appears that the petitioner is receiving the same service as all consumers in this locality, together with additional service rendered by a secondary circuit, and that it would be impracticable to order the respondent to give the direct line service contemplated by petitioner. The Board is of the opinion that there is not sufficient proof before it to warrant a determination at this time that the service is inadequate. We think the company ought not be required to furnish this special service at its expense. It is generally conceded that A. C. service is more practicable than D. C., which is being superseded from time to time by the former. The respondent is willing to provide for the D. C. service requested, at the petitioner's expense. Under these circumstances, the Board is of opinion that it ought not make an order in accordance with petitioner's suggestion.

The petition, therefore, will be dismissed. An order will so enter.

Dated January 29th, 1918.

In re New Jersey Junction R. R. Co.—Alteration of Grade Crossing.

ORDER.

This case having been duly heard and submitted by the parties, and full investigation of the matters and things involved having been had, and the Commission having, on the date hereof, made and filed a report, containing its findings of fact and conclusions thereon, which said report is hereby referred to and made a part hereof,

IT IS ORDERED that the complaint in this proceeding be and it is hereby DISMISSED.

Dated January 29th, 1918.

No. 511.

IN THE MATTER OF THE APPLICATION OF THE NEW JERSEY JUNCTION RAILROAD COMPANY, OWNER, AND THE NEW YORK CENTRAL RAILROAD COMPANY, LESSEE, FOR THE ALTERATION OF THE GRADE CROSSING OF NEW FERRY ROAD, WEST NEW YORK, AND THE TRACKS OF SAID COMPANIES.

1. Grade crossing alterations, though desirable for the improvement of traffic conditions on highways and reasonable to require under normal conditions, should not be ordered at this time, if this will tend to divert labor and materials from work of great immediate importance; if the result will not add materially to the efficiency of railroad operation, or if the cost of such improvements will add to the financial burdens of the government.

2. The alteration of a grade crossing is ordered where the petition is brought by a railroad company, the change will materially improve traffic conditions where there is need of such improvement and the Federal Government will not be subjected to any expense because of the improvement.

A. C. Wall and J. H. Patterson, for the petitioner.

Mark Sullivan, for the Town of West New York.

R. Catlin and H. Guttin, for the American Cotton Oil Company.

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L. D. H. Gilmour, for the Public Service Gas Company and Public Service Electric Company.

This Board has adopted on the date hereof and has directed that there shall be entered in its minutes an order requiring the New York Central Railroad Company, the municipalities, public utilities and other parties upon whom duties in the premises devolve to do such work and comply with such requirements as will result in the removal of the grade crossing of New Ferry Road and the tracks of the New Jersey Junction Railroad in West New York, and in the substitution of a crossing not at grade for the existing grade crossing.

While this order is explicit in its terms, and it is believed there will not be any misunderstanding of the duties and responsibilities imposed thereby, the Board deems it advisable, in view of the abnormal conditions now existing to supplement its order with a statement of the reasons why it should issue at this time.

It is generally appreciated that at present there is a demand, difficult to supply, for labor and materials in government and industrial activities, the efficient conduct of which is in the highest degree important for the public welfare. Because of this it is not regarded as a wise policy for men and materials, which might be used in work of urgent need, to be employed for improvements desirable in themselves but not of immediate necessity.

It is advisable also that State Commissions should not attempt to place upon railroad companies financial obligations as a result of permanent improvements, ordered by such Commissions, if these improvements are not now urgently needed and if the obligations so placed are passed on to the Federal Government because of Federal operation. For these reasons grade crossing alterations, though desirable for the improvement of traffic conditions on highways and reasonable to require under normal conditions, should not be ordered at this time, if this will tend to divert labor and materials from work of great immediate importance; if the result will not add materially to the efficiency of railroad operation, or if the cost of such improvements will add to the financial burdens of the Government.

In the case under consideration the petition has been brought

In re New Jersey Junction R. R. Co.—Alteration of Grade Crossing.

by the railroad company. The change desired at the crossing will not only make conditions safer for users of the highway, but is part of a plan which will materially improve traffic conditions where there is much need of such improvement. The Board understands that the railroad company will finance the improvement; that the Federal Government will not be subject to any expense because of the same, and that the company has arranged on satisfactory terms for the co-operation with it of the municipalities, public utilities and other parties who in compliance with the statutory requirement are included in the Board's order.

It appearing, therefore, that the alteration of the crossing will result in more efficient operation of the railroad; that a condition of exceptional danger will be corrected, and that no expense will be incurred by the Federal Government, it is the Board's opinion that notwithstanding the abnormal conditions now existing requirement of such alteration is reasonable and proper and the same is ordered.

Dated January 29th, 1918.

ORDER.

The New Jersey Junction Railroad Company, New York Central Railroad Company, Lessee, filed a petition in writing with the Board of Public Utility Commissioners, praying that, by virtue conferred by the several acts of the Legislature of the State of New Jersey, the Board order the alteration of the crossing of New Ferry Road, which is a public highway in the Town of West New York, where the same crosses at the same level the railroad of the New Jersey Junction railroad, by approving a certain plan submitted therewith, and by vacating certain highways and parts thereof, by opening new highways in place thereof, and by making such changes and alterations as might be necessary to accomplish the separation of the grades of the highway and railroad tracks aforesaid, and which petition set forth the facts upon which relief was sought, and the Board having fixed a time and place for a hearing before it upon said petition, and having given notice thereof to the towns of West New York and Guttenberg, the Township of North Bergen, the several municipalities affected and all corporations, co-partnerships and individuals, all in ac-

In re New Jersey Junction R. R. Co.—Alteration of Grade Crossing.

cordance with the provisions of the act of the Legislature of this State entitled "A supplement to an act concerning public utilities; to create a board of public utility commissioners, and prescribe its duties and powers, approved April 21st, 1911," which supplement was approved March 12th, 1913, and which constitutes Chapter 57 of the Laws of 1913, and the said municipalities, corporations, co-partnerships and individuals having filed severally their answers thereto and all parties at interest having been duly heard, it

Now appearing to the said Board that the New Jersey Junction Railroad Company is the railroad company whose tracks cross or are crossed at grade, and that the New Ferry Road and the Hoboken and Hudson River Turnpike are both public highways, and that the latter intersects the former at a point immediately west of the railroad as at present located, and that the New Ferry Road and the tracks of the New Jersey Junction Railroad Company, in the Town of West New York, cross each other at the same level, and that such crossing is dangerous to public safety, and that the public travel on such highway is impeded thereby, and that the New Jersey Junction railroad is leased to the New York Central Railroad Company, which operates it, and that such crossing should be altered according to a plan and profile approved by the Board, and that such plan and profile having been prepared;

Now, therefore, it is on this twenty-ninth day of January, nineteen hundred and eighteen, ORDERED, and the said Board of Public Utility Commissioners, by virtue of the power and authority vested in it by the aforesaid act, does hereby ORDER the New York Central Railroad Company to alter such crossing according to the plan and profile therefor annexed to and made part hereof, entitled "New Jersey Junction R. R., Leased and Operated by N. Y. C. R. R. Co., Buffalo and East River Division, Elimination of Grade Crossing New Ferry Road at West New York, Engineering Department, Scale 1"-50', R. E. Dougherty, District Engineer, New York, December 27, 1916, Issue 3, J. W. Pfau, Engineer of Construction. Approved N. Y. C. R. R., by Geo. W. Kittredge, Chief Engineer, February 21, 1917; approved Public Utility Commission, State of New Jersey, by

Secretary

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In re New Jersey Junction R. R. Co.—Alteration of Grade Crossing.

No. 59757, which said plan and profile are hereby approved by said Board of Public Utility Commissioners; by substituting therefor a crossing not at the grade of the public highway known as New Ferry Road; by changing the lines, width and direction thereof and carrying so much thereof as so changed over the railroad; by changing the lines, width and direction of the Hoboken and Hudson River Turnpike, and by vacating the remaining parts of said highways within the lines of the right of way of said railroad company, and further by vacating that part of New Ferry Road lying west of the railroad which is included between the right of way line of the railroad, the property of the New York, Ontario and Western Railroad Company and the line of the relocated New Ferry Road, by reconstructing said railroad and highways and by performing all other work required according to and as shown on said plan and profile.

AND IT IS FURTHER ORDERED that the said New York Central Railroad Company, the towns of West New York and Guttenberg, the Township of North Bergen, the New York, Ontario and Western Railroad Company, American Cotton Oil Company, Postal Telegraph-Cable Company, New York Telephone Company, Public Service Electric Company, Western Union Telegraph Company and Hackensack Water Company, and all other parties to this proceeding, and each and every one of them proceed with due diligence to the execution of this order, and comply with all of the requirements thereof and the duties imposed upon them thereby, and by the said act under which this order is made, and the laws of this State, and to that end they and each of them exercise in good faith all of the powers conferred upon them and each or any of them by the laws of this State.

AND IT IS FURTHER ORDERED that the said New York Central Railroad Company begin the actual work of construction required in the performance and execution of this order on or before the first day of June, nineteen hundred and eighteen, and continuously carry on the same thereafter and perform and fully comply with the directions and requirements of this order, and complete all of the work required thereunder to be done within two years from the date hereof.

This order shall take effect February 26th, 1918.

Dated January 29th, 1918.

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No. 512.

MARY A. KEOWN

v.

ATLANTIC CITY RAILROAD COMPANY.

The complainant challenges the legal right of a railroad company to occupy and use lands and facilities now occupied and used by it and alleges special injury by reason of the usual and necessary use of its facilities. There is no charge that it is an unusual or improper operation, as such, but that such usual and ordinary operation creates a nuisance and results in special injury to the complainant. Held:

1. The Board has no authority to declare, even though such is the fact, that the matters complained of by the petitioner constitute a nuisance. If it did so declare, it has no power to issue an injunction restraining the respondent, or if it should find that the petitioner is entitled to damages in a certain amount the Board could not issue an execution to recover such amount.

2. If the petitioner's complaint were directed against service of the respondent company or any practice which militated against safety or service or violated any municipal ordinance or statute relating to its duties as a public utility rather than the redress of private rights, the Board, in determining what is safe, adequate and proper service might change the regulations or practices of the respondent and thereby necessarily afford the petitioner material and adequate relief.

3. The relief to be afforded must be such as would not invade the constitutional jurisdiction of the Court of Chancery.

Wescott & Weaver (by *R. W. Wescott*), for the petitioner.

French & Richards (by *Thomas E. French*), for the respondent.

The petitioner is the owner of a store and dwelling located at the corner of Salem and Willow streets, in the City of Gloucester, where the petitioner and her predecessor in title have for many years conducted and carried on a retail grocery business.

It appears that the right of way of the respondent company passes immediately along the northerly side of petitioner's property.

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The petitioner filed her petition with this Board alleging, among other things:

"That from a period beginning not more than twelve years prior to the filing of said bill in Chancery, said railroad company has increased the use of its said way and extended the same at said point, not only by means of heavier tracks, engines and cars, and a more frequent operation of trains, but by laying new tracks over land not included in its right of way and by using such tracks for purposes not contemplated or approved in its charter and not necessary to the reasonable convenience and service of the public, said use consisting in the drilling of freight trains at said point and in the keeping of freight cars on such new tracks as well as by using its other tracks there for unnecessary drilling of trains and stationing of engines and cars at unnecessary and unreasonable times and for unnecessary and unreasonable periods of time.

"That such unnecessary and unreasonable use of its said way by said company had been and continues to be illegal and of substantial and continuing damage to your petitioner, in that (1) access to her said store by the purchasing public has been and is cut off for long, unnecessary and unreasonable lengths of time by lines of moving and standing freight cars and by the drilling of freight trains up and down before her said property; (2) the atmosphere in and about her said dwelling and store is polluted in hot weather by the unnecessary presence on said tracks immediately to the north of and also lying in and along Salem street, of oil cars and cars used for transporting animal matter and by the loading of the same, which pollution is detrimental to the reasonable and lawful enjoyment of said property; (3) the exterior and interior of said dwelling is eaten and blackened by hot cinders and smoke from such drilling and standing freight trains; (4) the walls and foundations of said house are broken and weakened, and fragile goods in said store are broken and destroyed by the unnecessary concussions and vibrations of such drilling freight trains; (5) the lawful enjoyment of the premises is disturbed by the blowing of whistles and ringing of bells on such freight trains, all of which has caused and is causing petitioner unnecessary discomfort and vexation and steady financial loss approximating from fifty to one hundred dollars per month in the conduct of said retail grocery business."

and praying for adequate relief in the premises.

The respondent company answered denying most of the allegations of the petition and alleging that the use of its tracks in front of petitioner's property and the operation of its trains thereon was proper and such as usual and ordinary operation necessitated.

It also appears that originally the petitioner filed her bill in Chancery of this State alleging substantially as in her petition filed with this Board, and the respondent company answered to the same effect as to the petition and the matter came on for hearing. The Court of Chancery, without going fully into the facts,

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was of opinion that relief could be afforded by this Board, and suggested that such application be made, pending which the cause would be held in that court.

The matter was heard some months ago, at the conclusion of which counsel asked opportunity to file briefs. For some reason briefs were not promptly filed by counsel until a comparatively recent date.

Chapter 115, P. L. 1911, 16 (a), (e) provides:

"16. The Board shall have power

"(a) To investigate, upon its own initiative, or upon complaint in writing, any matter concerning any public utility as herein defined.

"(e) After hearing, by order in writing, to fix just and reasonable standards, classifications, regulations, practices, measurements or service to be furnished, imposed, observed, and followed thereafter by any public utility as herein defined."

And also provides, 17 (a) and (b):

"17. The Board shall have power, after hearing upon notice, by order in writing, to require every public utility as herein defined:

"(a) To comply with the laws of this State and any municipal ordinance relating thereto and to conform to the duties imposed upon it thereby or by the provisions of its own charter, whether obtained under any general or special law of this State.

"(b) To furnish safe, adequate and proper service and to keep and maintain its property and equipment in such condition as to enable it to do so."

And also provides, 18 (c):

"18. No public utility as herein defined shall:

"(c) Adopt, maintain or enforce any regulation, practice or measurement which shall be unjust, unreasonable, unduly preferential, arbitrarily or unjustly discriminatory or otherwise in violation of law; nor shall any public utility as herein defined provide or maintain any service that is unsafe, improper or inadequate, or withhold or refuse any service which can reasonably be demanded and furnished when ordered by said board."

Counsel are not agreed as to the power of the Board to grant relief in the matter. To afford relief it would be necessary to conclude that this Board has power to find and determine that the unreasonable and unnecessary use, if any, by respondent of its tracks and the operation of its trains thereon in front of petitioner's property, is a nuisance, and that in so far as such use and operation interferes with petitioner's business, this Board should

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restrain respondent company, and to the extent that such use and operation has injured petitioner's business and property, this Board should award damages.

Undoubtedly, the Court of Chancery has jurisdiction in a case such as this and could afford adequate relief. *P. R. R. Co. v. Angel*, 14 Stew. (41 Eq.) 316; *Osborne v. O'Reilly*, 42 Eq. 467.

The questions presented are: First, has this Board power under the statute creating it to afford the petitioner the same relief as the Court of Chancery? If not, second, what relief can this Board give the petitioner in this proceeding?

In *Mungle v. Public Service Railway Co.*, P. U. R., Vol. 1, page 203, this Board, addressing itself to its jurisdiction, used this language:

"It is to be observed, in the first place, that many alleged failures of public utilities to comply with various statutes and ordinances are quite akin to alleged failures of individuals or ordinary corporations to make a similar compliance. Statutes exist forbidding false imprisonment and libel. It cannot with reason be contended that this Commission was ever expected or empowered to take cognizance of such cases, and to order public utilities guilty of these or similar offenses to desist therefrom and to conform with the laws forbidding the same.

"Similarly, an ordinance, as for example, an ordinance governing the disposal of rubbish, may be defied by either a natural individual, an ordinary business corporation, or a public utility. But the obvious remedy for such a violation is to be sought in the ordinary legal tribunals, and not in proceedings brought before this Commission.

"It does not, therefore, follow that this Board can or ought to take cognizance of every possible violation of law or ordinance, by a public utility, unless such violations are of a kind and character which intrinsically relate to the special nature, work and function of a public utility such as are indicated or implied in the statutes defining the powers and duties of this Commission.

"As we have intimated above, where the subject matter of a contract between a public utility and a municipality consists of matters not specifically germane to the essential nature and function of a public utility, the municipality, if aggrieved by the utility's non-compliance with the contract, must apply to the courts for redress. And equally where the subject matter of such a contract is removed beyond this Commission's inquiry and review, because the subject matter of the contract, even though germane to the nature and function of a public utility as such, is territorially removed from the jurisdiction of this Commission, the municipality aggrieved must seek redress in the Courts."

And see also *Merchantville v. Penna. R. R. Co.*, P. U. R., Vol. 1, page 225.

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It seems to the Board that the language quoted respecting the Board's jurisdiction is germane to the question involved in this proceeding.

An analysis of the petitioner's testimony discloses clearly that her complaint is not directed against the respondent for failure to furnish safe, adequate and proper service as affecting herself, and likewise others, demanding like service, nor does it relate to the special nature, work and function of a public utility as contemplated by the statutes defining the powers and duties of this Board. The complaint is one that challenges the legal right of respondent to occupy and use the lands and facilities now occupied and used by it, and alleges special injury to complainant, by reason of the usual and necessary use of its facilities. There is no charge that it is unusual or improper operation, as such, but that such usual and ordinary operation creates a nuisance and results in special injury to petitioner.

The powers and duties of the Board are statutory. Beyond that the Board has no authority. The Board in examining its statutory jurisdiction, finds no authority empowering this Board to declare, even though such is the fact, that the matters complained of by the petitioner constitute a nuisance. If it did so declare, the Board has no power to issue an injunction restraining the respondent company, or if it should find that the petitioner is entitled to damages in a certain amount, the Board could not issue an execution to recover such amount. If, then, such relief is the relief that this petitioner seeks, the petitioner will have to obtain her redress from the courts.

The Board, therefore, determines that it is without authority to grant such relief as the Court of Chancery could decree. What relief, if any, can this Board give in the premises?

The Board has authority under the statute to require every public utility to furnish safe and adequate and proper service. In requiring safe, adequate and proper service, this Board can fix just and reasonable regulations, practices, measurements or service to be furnished. If, therefore, the petitioner's complaint were directed against service of the respondent company, or of any practice which militated against safety or service, or violated any municipal ordinance or statute relating to its duties as a public

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utility rather than the redress of private rights, this Board might in determining what is safe, adequate and proper service, change the regulations or practices of the respondent company and thereby necessarily afford the petitioner material and adequate relief. The petitioner files no such complaint. The relief to be afforded must be such as would not invade the constitutional jurisdiction of the Court of Chancery.

The Board concludes that, from the proofs submitted, there is no matter within its competence which calls for a corrective order.

The petition, therefore, will be dismissed and an order will be accordingly entered.

Dated January 29th, 1918.

ORDER.

This case being at issue upon complaint and answer on file and having been duly heard and submitted by the parties, and full investigation of the matters and things involved having been had, and the Commission having on the date hereof made and filed a report, containing its findings of fact and conclusions thereon, which said report is hereby referred to and made a part hereof,

IT IS ORDERED that the complaint in this proceeding be and it is hereby DISMISSED.

Dated January 29th, 1918.

No. 513.

BOARD OF EDUCATION OF WEST LONG BRANCH ET AL. v. TINTERN MANOR WATER COMPANY—REHEARING.

1. An order directing a water company to extend its facilities to supply service should require only such extension as will furnish "safe, adequate, and proper" service under the conditions now existing or which may be fairly presumed to exist during a reasonable period of the ordinary life in service of such extension.

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2. Petition that a water company be ordered to lay a four-inch instead of a six-inch main is denied, where it is apparent that the four-inch main would be inadequate for purpose of fire protection.

Thomas P. Fay, for the petitioners.

Edmund Wilson, for the respondent.

On October 30th, 1917, this Board issued a report on the evidence offered in the hearing on the original complaint. As may be seen by reference to that report, the petitioners requested an extension of main from the present main at the corner of Locust and Cedar Avenues, West Long Branch, northerly along North Cedar Avenue, a distance of 2,120 feet and a lateral main from the first mentioned, branching off at Wall Street, running thence to a point in front of the public school (see Diagram I. annexed). It was assumed in the report that this main was to be 6 inches in diameter and that three municipal hydrants would be installed at points along same. It was indicated in the report that the revenue to be derived from that portion of the main extending from Locust and Cedar Avenues to Wall Street, and thence along Wall Street to the school house, and including the three hydrants, was to be \$240 a year, and that the revenue to be derived from the 1,334 feet of 6-inch main running northerly from Wall Street was to be \$230, if run in connection with the first-named extension. The opinion was also expressed that it was probable that the prices of cast iron pipe would decrease somewhat after the issuance of the report, which, to a limited extent, has actually taken place.

On November 30th petitioners requested that the case be reopened on the ground that—

“* * * in their judgment, a 4-inch main would be sufficient, and we therefore respectfully petition that an adjudication may be made as to the amount of business to be furnished sufficient to justify the construction and maintenance with a 4-inch main being installed on North Cedar avenue and Wall street, being 2,120 feet on North Cedar avenue and 496 feet on Wall street.

“We further respectfully pray that the decision of the Board may be in the alternative so that it may be optional with the petitioners to lay a 6-inch main over part of the route and a 4-inch main over another part of the route.

“We further respectfully petition that the case may be reopened, for the purpose of having such additional order made.”

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After oral argument the Board, at the session held December 24th, 1917, permitted the case to be reheard.

Under the act creating this Board, Section II., 17, the Board is empowered, under paragraph (b), to require utilities to "furnish safe, adequate and proper service." In conferring this power upon the Board, the conclusion must follow that the Board is expected to exercise such power in the spirit of the statute. Inasmuch as the petitioners in this case ask that this Board issue an order requiring an extension, it is proper that such order will at the same time require only such an extension as will furnish "safe, adequate and proper" service under the conditions now existing or which may be fairly presumed to exist in the future during a reasonable period of the ordinary life in services of such extension. Counsel for the petitioners, on page 47 of the transcript of the evidence in this case, classified customers to be served by this extension in the following language:

"The most important is the school, the second important is fire purposes, and the third important is the consumers."

The three classes referred to by counsel for the petitioners, so far as quantity of water to be drawn is concerned, resolve themselves into two; that is to say, domestic consumption, including the school; and fire services, which includes the three fire hydrants.

On the basis of a maximum draft of 100 gallons a minute, a consideration of Appendix A of this report will show that with 60 or 65 pounds initial water pressure at Cedar and Locust Avenues, a 4-inch main will furnish "safe, adequate and proper" service for domestic and school purposes throughout both parts of the proposed extension with a relatively large reserve capacity for a number of years to come.

Taking up the question of "safe, adequate and proper" fire service, however, introduces an element requiring, in addition to domestic demand, a very much larger flow of water for fire purposes, and, consequently, a very much larger pipe, or involves, unless a larger pipe is used, a very much larger drop in pressure per unit of length, to be provided for by the pumping system.

In the matter of the investigation of the service afforded by the

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Hackensack Water Company, the Board, in its report dated April 28th, 1917, page 26, concluded as follows:

"The ordinary fire stream is supposed to deliver from 200 to 250 gallons of water per minute with a $1\frac{1}{8}$ -inch smooth nozzle. With this amount of water flowing, the loss in pressure due to passing through the standard $2\frac{1}{2}$ -inch hose is twelve to thirteen pounds per 100 feet. Forty pounds at the nozzle is sufficient, under ordinary conditions, to deliver the normal quantity of water referred to. For every 100 feet of hose beyond this, there must be an additional twelve or thirteen pounds pressure at the hydrant."

In Appendix A, page 34, of said report, the company was required to provide two such fire streams for concentration in residence sections in towns of from 1,000 to 1,600 population.

On the same page will be found the further remark:

"In some outlying locations which are thinly built, where buildings are low and where requirements as specified would require the company to make expenditures for pipe, extensions and connections not justified by the revenue to be obtained, a lessened amount of water at a somewhat lower pressure may be accepted until such time as the section is developed sufficiently to justify an adequate gridiron of mains."

Instead of the minimum requirement of two fire streams each delivering 250 gallons per minute at a nozzle pressure of 40 pounds, and considering the height and distance a part of the buildings in the neighborhood to be served, and of the improbability of a conflagration, the minimum in this case may be reduced to two fire streams each delivering 150 gallons per minute at a nozzle pressure of 25 pounds. If 250 feet of $2\frac{1}{2}$ -inch best rubber-lined hose be used with a 1-inch (or, possibly, $1\frac{1}{8}$ -inch) smooth nozzle, Table II. indicates that a pressure of 40 pounds will be required at the hydrant hose connection. Although there is a loss of several pounds pressure in the hydrant and its service, 40 pounds will be taken as the pressure required at the northerly termination of the main in North Cedar Avenue (Diagram I., Point D).

1. As may be seen by Appendix I., column (10), it will require a pressure of 170 pounds (that is, 130 pounds drop in the main, plus 40 pounds required at hose connection) to force 300 gallons of water per minute through a 4-inch main, 2,120 feet in length, assumed to be level. This is the main proposed by the petitioners. It will require an initial pressure of 60 pounds (or a drop in pres-

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sure of but 20.1 pounds) if a 6-inch main be used to furnish 40 pounds at the hose connection at D. As the available initial pressure in the main at North Cedar and Locust Avenues is only 60 to 65 pounds, it is obvious that the required pressure of 170 pounds for a 4-inch main cannot be obtained under the normal method of operating the company's plant. To require the present pressures to be increased to 170 pounds at Cedar and Locust Avenues would be unreasonable, for the reason that it would necessitate that the pressure of water for the entire territory served by the respondent be increased 100 to 110 pounds, entailing increased leakage and further increased costs of pumping. Even if the system of mains were heavy enough to withstand such pressures, the cost would be out of all proper relation to the benefits conferred. On the other hand, a 6-inch main, 2,120 feet long, will furnish 300 gallons at a nozzle pressure of 25 pounds through 250 feet of 2½-inch rubber hose, though but little more. It should not be extended much further (if it is to furnish 300 gallons at 25 pounds nozzle pressure) unless reinforced or tied in to some other part of the system of mains. In none of the calculations so far given is provision made for any domestic consumption during the period that water is required for extinguishing fires, nor for simultaneous fires occurring near either the school house (C) hydrant or the one proposed to be placed at Wall and Cedar (B). In such event, but one stream would be available under the assumed nozzle pressure at Point D., Diagram I.

2. If a 4-inch main were extended to the school, viz., North Cedar Avenue and Wall Street, the drop in pressure for 300 gallons draft, under conditions assumed, would be—Appendix I., column (11)—79.1 pounds, to which is to be added 40 pounds required at hose connection. This pressure of 119.1 pounds could not be obtained at Locust and Cedar, so the 4-inch main would not adequately serve the school with two streams, even if no water were taken elsewhere on the proposed extension. One stream could be furnished if only 100 feet of hose were used and no water used elsewhere. This would be called a "feeble" stream by firemen.

3. Assume a 6-inch main to be laid on North Cedar from Locust to Wall. With 300 gallons flowing to the latter point, the pres-

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sure of 60 pounds at Locust would decrease—Appendix I., column (7)—to 52.5 pounds. As 40 pounds pressure is required at the hydrant hose connection, as before shown, this leaves 12.5 pounds to provide for drop in pressure in a 4-inch main from North Cedar and Wall in either direction. For a flow of 300 gallons, the drop in such a main is—Appendix I., column (2)—6.17 pounds per 100 feet of main. The 12.5 pounds available, divided by 6.17 pounds, indicates that only about 200 to 250 feet of 4-inch main should be used, if even two “feeble” streams are to be delivered. This precludes the use of any 4-inch main for the extension in either direction from North Cedar and Wall if “safe, adequate and proper” fire service is to be furnished. In the instant case this has been interpreted as liberally as possible to accord with the petition for a rehearing, but even with such liberal interpretation of what constitutes “safe, adequate and proper service,” the second petition cannot be granted.

The conclusion must follow from the above analysis that—

(a) The domestic and school use (which probably would never exceed 100 gallons if all of the petitioners were to draw water at once) could be very fully provided for through a 4-inch main.

(b) The 4-inch main, however, would prove entirely inadequate for fire purposes, even now. The company, on its own initiative, might install 4-inch pipe on portions of its system and assume the risk of its proving inadequate at some relatively short future time. In such a case, the Board, in the proper exercise of its powers, would order such inadequate pipe replaced by a main of proper size. But it does not appear proper for this Board to order the company to extend any part of its system in such a manner as not to take into account inadequacy patent at present or imminent in a relatively short period. Were the Board to act otherwise, what would be its position if it had to reverse its own order by requiring the company to replace pipe, installed in accordance with a prior order, at a time long before such pipe had reached its reasonable period for replacement, if proper consideration for the future needs had been given? Premising prudent management, depreciation of plant and property is fairly a charge upon the customers to whose service such plant and property is devoted. If imprudent extensions are ordered, which have to be replaced before their useful life is exhausted, this will entail a

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depreciation charge pro tanto higher to reimburse the company. In the end the customers will suffer loss. It is evident, then, that a 6-inch main is necessary only in order that fire service may be given. The additional cost of a 6-inch main over the 4-inch main is therefore chargeable to fire service and is properly a charge on the municipality.

With respect to the revenue to be derived from the first and second extensions, as set forth in the report in the first hearing, however, the following modification will be made by reason of decreases in the cost of cast-iron pipe, as was predicted in that report.

At the date hereof the current cost of 6-inch cast-iron pipe installed has dropped from \$1.65 to \$1.40, a difference of 25 cents per lineal foot. The 1,262 feet in the first extension to serve the school, and including 3 hydrants (Diagram I., A to C), would, therefore, cost \$315.50 less, which, at 6 per cent., would require \$25.24 less revenue per annum to be assured to the company. Deducting \$25 from \$240 determined in the Board's report on the original petition, leaves \$215 annual revenue to be assured for a period of at least five years. In a similar manner the annual revenue of \$230 required to be assured on the second extension (Diagram I., B to D) for a period of at least five years will be reduced to \$205. If both extensions be made the total annual revenue to be assured for a period of at least five years will be \$420.

The Board, therefore, concludes:

1. The request that the Board modify its order requiring the installation of 6-inch main should be denied.

2. The original order should be modified as follows, conditional or immediate action by the petitioners:

- (a) The annual revenue to be assumed on the first extension therein described should be reduced from \$240 to 215.

- (b) The annual revenue to be assured on the second extension therein described, if run in connection with the first one, should be reduced from \$230 to \$205.

In other respects the original order will remain in full force and effect.

A modified order will so issue.

Dated February 5th, 1918.

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APPENDIX I.

DROP IN PRESSURES IN 4-INCH AND 6-INCH MAINS FOR VARIOUS LENGTHS AND DISCHARGES IN GALLONS PER MINUTE.

Gallons per Minute.	(1)	Drop in Pressure per 100°.		Drop in Pressures.						In 2,120 feet.		In 1,282 feet.	
		4"	6"	In 476 feet.		In 786 feet.		In 1,334 feet.		4"	6"	4"	6"
				4"	6"	4"	6"	4"	6"				
		(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
50	0.34	0.03	1.6	0.15	2.7	0.2	4.5	0.4	7.2	0.6	4.4	0.4	0.4
100	1.14	0.13	5.4	0.6	9.0	1.2	15.2	1.7	24.2	2.6	14.6	1.7	1.7
150	2.20	0.28	10.5	1.3	17.3	2.2	29.4	3.7	46.6	5.9	28.2	3.6	3.6
200	3.37	0.47	16.0	2.2	26.5	3.7	45.0	6.3	71.4	10.0	43.2	6.0	6.0
250	4.00	0.70	21.9	3.3	36.2	5.5	61.4	9.3	97.5	14.8	59.0	9.0	9.0
300	6.17	0.95	29.4	4.5	48.5	7.5	82.3	12.7	130.8	20.1	79.1	12.2	12.2
350	8.15	1.23	38.6	5.9	64.0	9.7	108.7	16.4	172.8	26.1	104.5	15.8	15.8
400	....	1.50	....	7.1	....	11.8	....	20.0	....	....	....	....	....
450	....	1.80	....	8.6	....	14.2	....	24.0	....	....	....	....	....
500	....	2.10	....	10.0	....	16.5	....	28.0	....	....	....	....	....

Assumed age of pipe twenty years, being the mean of its estimated life in service.

In re Stone Harbor Electric Light and Power Co.—Sale of Equipment.

TABLE II.

PRESSURES REQUIRED AT HYDRANT WHILE STREAM IS FLOWING TO MAINTAIN
PRESSURES GIVEN AT HEAD OF COLUMNS THROUGH VARIOUS LENGTHS
OF BEST QUALITY 2½" RUBBER LINED HOSE.

Smooth Nozzles		Discharge Gals. per Min.	Single 2½-inch Lines				
Size Nozzle.	Nozzle Pressure.		100 ft.	200 ft.	300 ft.	400 ft.	500 ft.
1"	20	132	25	30	35	39	44
1"	25	148	31	37	43	49	55
1½"	20	167	28	35	42	49	56
1½"	25	187	35	44	53	62	71
1½"	45	251	62	77	93	108	123

No. 514.

IN THE MATTER OF THE APPLICATION OF STONE HARBOR ELECTRIC LIGHT AND POWER COMPANY FOR APPROVAL OF SALE OF CERTAIN EQUIPMENT.

An electric utility is the owner of a similar utility operating in another municipality. Certain plant replacements of the latter are required and application is made by the owning utility to sell some of its property in a disused power house to obtain funds to make the replacements. Permission to sell this property is given.

Reese P. Risley, for the petitioner.

Application was made by Stone Harbor Electric Light and Power Company on February 5th, 1918, on which day a hearing was held in the matter, for the sale of certain equipment in the Stone Harbor power station. At present the station is not being operated. The equipment in question includes a 100 hp. oil engine, originally purchased as two separate units, and later coupled together to form one 100 hp. unit; also two generators and belts, etc.

A report by the company, in accordance with Conference Order No. 7, shows that the oil engine and generators were acquired at

 In re Stone Harbor Electric Light and Power Co.—Sale of Equipment.

the price mentioned in the petition and testified to at the hearing. The belting is not mentioned separately in this report, but the total for the account in which it should appear indicates that this amount, and about \$80 additional, was paid for miscellaneous equipment. It seems reasonable to conclude that the amount at which the property is carried on the books is accurate. These amounts are stated as follows:

Oil engine	\$5,597 38
Generators, etc.	2,821 10
Belting	622 57
Total	\$9,041 05

The company is now able to sell this property for not less than \$5,000. It is not required for operation under existing conditions.

The Vulcan Electric Light, Heat and Power Company, at Cape May Court House, is owned by the Stone Harbor Company. Its stack has blown down and immediate expenditures are necessary to put that plant in operating condition. This financing must be done by the Stone Harbor Company under present conditions.

The Stone Harbor Company states that it proposes to use part of the proceeds of the sale of property to purchase stock of the Vulcan Company. It was stated at the hearing that the latter company has been authorized by the Board to issue \$5,000 of stock, and also \$2,500 of stock to capitalize extensions and improvements, but that such issues of stock have never been sold. We are unable to find approval of the issue of \$2,500, and no application for approval of stock has been made since July 21st, 1914, when the Board approved the issue of \$5,000 of stock. No report, under Conference Rule No. 7, has been filed in reference to this issue, and in reference to other security issues as well.

The replacements contemplated by the Vulcan Company referred to above cannot be capitalized by the issue of stock. If there are proper expenditures not heretofore capitalized, application can be made for securities on account thereof. Care should be exercised to see to it that the proposed expenditures are properly treated and that any sums advanced by the State Harbor Company are properly accounted for.

Township of Florence vs. Public Service Gas Company—Extension.

The companies should forthwith file any reports required by the rules of the Board.

The Board will give approval to the sale of the property specified in the company's petition, to realize not less than \$5,000. This appears to be a reasonable price for the property, when due consideration is given to loss of value by depreciation.

Dated February 11th, 1918.

No. 515.

**TOWNSHIP OF FLORENCE v. PUBLIC SERVICE GAS COMPANY—
IN RE EXTENSION.**

1. It is not necessarily true that eight per cent. should be earned during the development of each particular extension of a public utility any more than that a company should earn eight per cent. on its entire capital, used and useful, during its development period.

2. Each extension may have its development period, just as the company as a whole may have such a period. During the development period it is the policy to compute interest on an ordinary interest basis.

Charles B. Green, for the petitioner.

L. D. H. Gilmour, for the respondent.

The Township of Florence filed a complaint alleging, among other things:

That the Township Committee "has done everything that they possibly could to have the Public Service Gas Company extend their main so as to take in about twenty-five houses in this section" (that is, "Florence Heights," section of Township of Florence):

That "they could extend their main from Cedar Lane * * * coming over and following Olive Street to the intersection of Delaware Avenue and Olive Street."

That "the gas company could make connections from their

Township of Florence *vs.* Public Service Gas Company—Extension.

mains at four different points, namely, Dobbins, Roebling, Cedar Lane or the end of their main on Front Street * * *."

That "finally the gas company told the Township Committee that if they would put up \$1,500 the gas company would extend their main to take in this section and for every house that was erected they would return \$50 until the \$1,500 was finally returned."

The respondent's answer to the complaint was as follows:

"The estimated cost of the extension used by the Board's Inspector is not the company's estimate. 4"-pipe is taken at 65c. a foot laid. The pipe alone is costing 65c. or 70c. a foot. 4"-main laid costs approximately 90c. a foot.

"The figure for plant investment of \$1.50 per M. cubic feet is based on 1911 figures. These are inadequate at the present time.

"The figures used by the Board's Inspector in estimating the cost of furnishing the service are based on costs for the year 1916, which are considerably less than present costs. They exclude all new business costs. They include only 2% of the gross revenue for franchise tax notwithstanding that the company will be liable for a tax of 3% based on the revenue for 1917, 4% based on revenue for 1918, and 5% based on revenue for 1919. The interest on the investment is figured at only 6%, which is inadequate.

"As the difficulty of financing and the difficulty of obtaining materials, even where the money is at hand, limits the extensions which the company can make, it is not in the interests of the general public that extensions should be made under a guarantee in excess of the probable business. While this may accommodate the individual applicant for service, it will reduce the number of customers which can be supplied and it is not in the interest of the greatest number."

The Board's engineer investigated the matter complained of and reported that in order to supply the houses desiring gas service in the Heights section of Florence, it would be feasible to extend the existing low pressure 6-inch main on Front Street from the dead end near Spruce Street easterly 1,680 feet; thence southeasterly for a distance of 1,008 feet to Olive Street; thence southward on Olive Street for a distance of 1,236 feet, making a total extension of 4,124 feet. This extension would not serve seventeen houses and six street lamps.

The cost of the extension, as estimated by the Board's engineer, would be \$3,173.60; the plant investment for existing facilities would be \$783, or a total investment of \$3,956.60. The cost of furnishing service was estimated as follows:

Township of Florence vs. Public Service Gas Company—Extension.

522,000 cu. ft. of gas @ \$0.4017 per M. cu. ft.....	\$209 69
17 customers @ \$2.17 each.....	36 89
Depreciation, 1.52% of investment.....	59 35
Taxes, 0.7% of investment.....	27 70
Interest, 6.0% of investment.....	237 40
Total estimated cost, including 6 street lamps @ \$24.87.....	\$571 03
Estimated revenue	538 05
Deficiency	\$32 98

The Board's Chief Inspector recommended that the company be required to make the extension upon receipt of an assurance of an annual revenue of \$571.

The company's witness, Harry Ellis, claimed that the low pressure extension, providing for 6 street lamps and 17 customers, would cost \$3,900 at prices current in January, 1917. He proposed an alternative high pressure extension as follows:

Beginning at a dead end of the 2-inch high pressure main on Delaware Avenue, Florence (or Dobbins) station of the Pennsylvania railroad, 495 feet northwesterly from the railroad track, running thence along Delaware Avenue northwesterly about 3,583 feet to Front Street; thence westerly along Front Street about 411 feet to a dead end; with a lateral extension, from the foregoing, along Olive Street southwesterly about 1,235 feet, making a total of 5,229 feet of 2-inch wrought iron main to be extended. Including 17 services with governors and 6 street lamps, the witness estimated the cost of this extension to be \$3,602.99 (details not given). The cost of the main installed was figured at 52 cents per lineal foot.

The company's comptroller, W. S. Barker, submitted the following estimate of the cost of rendering the service, including 5 per cent. return on capital required for the extension and for use of existing facilities:

Investment, Existing Facilities and Extension.

Cost of extension (by Ellis).....	\$3,602 99
Plant investment (existing facilities), \$1.50 on 492 M. cu. ft.....	738 00
Total investment	\$4,340 99

Township of Florence vs. Public Service Gas Company—Extension.

Expense of Service.

1. 408,000 cu. ft. @ 41.64c.....	\$169 89
2. Customer cost, 17 @ \$2.31.....	39 27
3. 6 street lamps @ \$19.42.....	116 52
4. Tax on gross earnings, 3% of revenue.....	15 49
5. Uncollectible bills	2 58
6. Depreciation, 1½% on \$4,341.....	65 11
7. Taxes, 0.7% on \$4,341.....	30 39
8. Interest, 8% on \$4,341.....	347 28
Total	\$786 53

He estimated the revenue to be derived on same as follows:

5 street lamps	\$149 25	
17 customers	367 20	
		\$516 45
Deficit		\$270 18

The Board is of the opinion that the estimate of \$786.53 for expense of service is too high. If computed at 6 per cent. the revenue required on the basis of cost submitted by the company would be less than \$700.

It is not necessarily true that 8 per cent. should be earned during the development of each particular extension any more than it would be to assume that a company should earn 8 per cent. on its entire capital, used and useful, during its development period. Each extension, considered by itself, may have its development period, just as the company, as a whole, may have such period. During the development period it is the policy to compute interest on an ordinary interest basis (see *Long Branch v. Tintern Manor Water Co.*, N. J. Eq., Vol. 70, p. 71 *et seq.*, especially pp. 94 and 95). In that case the learned Chancellor deemed 5 per cent. sufficient, whereas the Board has used 6 per cent. in its calculations in this proceeding.

The Board is of the opinion that the revenue to be assured on the extension for 17 customers and 6 street lamps lies between \$570 and \$700, but requires more evidence to fix a more definite figure.

In view of the above facts, the petition will be dismissed, but the matter will be reopened on application of the petitioner if it is desired to submit further testimony as to the amount of annual revenue which will be assured if the extension is ordered.

Dated February 11th, 1918.

Dr. Alfred Pittis *vs.* Plainfield-Union Water Co.

No. 516.

DR. ALBERT PITTIS

v.

PLAINFIELD-UNION WATER COMPANY IN RE CHARGES FOR
STREET EXCAVATIONS AND REPLACING PAVEMENTS AFTER
INSTALLING SERVICE CONNECTIONS.

1. The Board's rules provide that in making service connections to a water main the municipal charge, if any, for opening the street shall be paid by the applicant.

2. The municipal charge for permission to open the street does not include the charge for either excavation in or repaving of the street and is intended to cover only the clerical fee for recording the permit.

3. Where a city charged the consumer for replacing the pavement under which service pipes were laid to supply service immediately desired, it is held that the water company should pay the charge.

4. Where the charge applies to repairs and replacements at places where service is not immediately desired, the complainant should pay the same.

Dr. Albert Pittis, in person.

W. J. Whelan, for the respondent.

L. Edward Herrmann, for the Board.

Under date of October 27th, 1917, the complainant made the following allegations:

"I am the owner of the property located at the corner of East Front Street and Watchung Avenue. Both streets making this corner are paved with permanent brick. The Plainfield-Union Water Company have supplied me with water from its main to the curb without cost to me, with this exception, in that they hold the repaving of the trenches which they dug, in order to supply me with water, is up to me to pay for.

"This is a matter of a little over sixty dollars and I have maintained that the cost of this road paving, according to the latest ruling of the Public Utility Commission, is a matter for the water company to pay for the replacing and not for me."

Dr. Alfred Pittis vs. Plainfield-Union Water Co.

In answering this complaint, the respondent alleged:

"On June 16th, 1917, Dr. A. Pittis applied for seven water services at the property corner of Watchung Avenue and East Front Street, Plainfield, to supply a new one-story building about to be erected at that point, consisting of four stores on Watchung Avenue and four stores on East Front Street; four taps to be connected through the main on Watchung Avenue and three taps through the main on East Front Street, with the intention of utilizing the old service connection for the corner store.

"In 1909, when the City of Plainfield constructed the first brick pavement, they notified the company that they would insist upon restoring the brick pavements wherever we made a service connection and they have been charging the property owner for the cost thereof. They followed this practice in the case in question.

"We have construed the clause in the supplemental order of your honorable body dated February 19th, 1917, on page 25 of Rules, Regulations and Recommendations for Water Utilities, reading 'The municipal charge, if any, for permission to open streets shall be paid by the applicant,' to mean that the charge of the City for restoring the brick pavement is a municipal charge and should be paid by the applicant, who in this case is Dr. Pittis.

"When the building in question was nearly completed, Dr. Pittis changed the plan of the part fronting on East Front Street from four stores to one and rented the entire part thereof to the Hudson Motor Company and they have applied for and are taking water through the old tap and the three new taps on the East Front Street side of the building are not active and probably will not be so during the occupancy of the Hudson Motor Company. Incidentally, are we not entitled to charge Dr. Pittis for the cost of three new taps on East Front Street?"

The matter was heard on January 16th, and the following testimony introduced:

The City of Plainfield rendered bills to Dr. Pittis for repairing the pavement on Watchung Avenue, where the services are to be used, for \$10.50 and \$17.56, a total of \$28.06; and for the three inactive services on East Front Street, bills for \$18.23 and \$14.42, a total of \$32.65. The Plainfield-Union Water Company claims that the three inactive services on East Front Street cost, for labor, material and superintendence, the sum of \$49.74.

It was agreed by the parties to this case that the above statements set forth hereinabove, are true.

The supplemental order of this Board, in the matter of establishing standards and regulations to be followed by utilities supplying water for public use, effective June 21st, 1917, reads as follows:

Dr. Alfred Pittis vs. Plainfield-Union Water Co.

"Upon making service connections, the tapping of the main shall be done and the curb cock and couplings, the service lines from main to curb, curb stop-cock and couplings and curb box shall be furnished and placed by the utility or its agent at the expense of the utility. * * *

"The municipal charge, if any, for permission to open the street shall be paid by the applicant. . . .

"Whenever a tap is made through which regular service is not immediately desired, the applicant shall bear the entire expense of tapping the main, laying and maintaining the service pipes, couplings, and connections, but shall be entitled to a refund for such part as the utility is hereinbefore required to assume, whenever regular service is begun."

From the respondent's answer, it will be observed that the respondent relies on the second paragraph of the Board's order above quoted in proof of its contention that the charge for repaving should be paid by the applicant (in this case, the owner). But the municipal charge for *permission to open* the street does not include the charge for either excavation in or repaving of the street, and is intended to cover only the clerical fee for recording the permit. This is usually a merely nominal charge. With respect to the new services installed on Watchung Avenue, through which it is agreed that regular service is immediately desired for the various tenants, it is clear, from a careful reading of the order, that the Plainfield-Union Water Company should pay for the proper cost of repaving over the four newly installed services. If sewer and water service connections were made in the same excavation, the cost should be equitably apportioned between the two utilities concerned, and the water utility should assume the payment of the cost, so apportioned.

With respect to the three new services on East Front Street, however, the case is different by reason of the fact that "regular service is not immediately desired" through these three connections; the second paragraph of the order as above quoted will, therefore, apply in this case. The complainant should, therefore, assume the payment of the cost of the repaving over these three services as well as the payment to the respondent of the cost of installing the three services with the express understanding, however, that such cost is to be repaid to the complainant, pro rata, as each service connection comes into regular service for use of water, less necessary costs of maintenance during such period as same may remain inactive.

The Board, therefore, finds and concludes:

Dr. Alfred Pittis *vs.* Plainfield-Union Water Co.

(1) The complainant should assume and pay for the cost of installing the three service connections to his property on East Front Street and also the cost of repaving over same.

(2) Whenever regular service of water through one or more of the three service connections on East Front Street shall be begun, the respondent shall repay to the complainant for that portion of the services lying between the main and the curb box the sum or sums, paid out by the latter, as provided by the conclusion stated in (1) preceding, less such necessary costs for maintaining same as shall have been actually incurred.

(3) The respondent shall assume and pay for the cost of repaving over the four services required for regular service of water to the premises of the complainant fronting on Watchung Avenue.

An order will so enter.

Dated February 15th, 1918.

ORDER.

This case being at issue, upon complaint and answer on file, and having been duly heard and submitted by the parties, and full investigation of the matters and things involved having been had, and the Board having, on the date hereof, made and filed a report containing its findings of fact and conclusions thereon, which said report is hereby referred to and made a part hereof,

The Board of Public Utility Commissioners HEREBY ORDERS that when the regular service of water shall be begun by the Plainfield-Union Water Company through one or more of three service connections on East Front Street to supply water to the property of the complainant, the said Plainfield-Union Water Company shall repay to the complainant the sum or sums paid by him to provide that portion of the service pipe or pipes lying between the main and the curb box, less such necessary expense for maintaining the same as shall have been actually incurred by said Plainfield-Union Water Company. The said Plainfield-Union Water Company shall assume the expense, and pay for the cost of repaving over four services required for the regular supply of water to the premises of the complainant fronting on Watchung Avenue.

This order shall become effective March 14th, 1918.

Dated February 15th, 1918.

In re Elizabethtown Water Co.—Street Excavation and Replacing Pavements.

No. 517.

IN THE MATTER OF INVESTIGATION AS TO THE PRACTICE OF THE ELIZABETHTOWN WATER COMPANY WITH RESPECT TO CHARGES FOR STREET EXCAVATION AND REPLACING STREET PAVEMENTS FOLLOWING SERVICE CONNECTIONS.

The municipal charge for permission to open a street, to be paid by a user of water for whom a service pipe is laid, is the amount to be paid in connection with the clerical work incident to issuing and recording the written instrument, and cannot be reasonably interpreted to include any part of the excavation of the street necessary to be done before the service pipe can be laid, nor any part of the repaving of the street after the service pipe has been laid.

Fredric J. Faulks, for the company.

Joseph T. Hague, for the City of Elizabeth.

On June 20th the Board received from Thomas Lowe, of Elizabeth, a complaint in which the following allegations were made:

"I am a plumber here in the City of Elizabeth. I understand that the Elizabethtown Water Company had to dig (and) lay water service as far as the curb. Now the water company say that we have to do all the digging and they will lay and furnish the pipe. If this is so, please let me know."

Similar complaints were received from time to time. After an investigation of the facts, the Board's Chief Inspector recommended that the company should assume the payment of excavating and replacing the pavement of the street required for the installation of new services.

In answer to such recommendation the company, by its secretary, alleged that

"* * * * * the City of Elizabeth requires a payment from the applicant before they will issue a permit for the digging up of the street. Under this regulation and after a conference with the Department of Public Works, we decided that we would require the owner to procure the permit for the opening of the street from the City of Elizabeth.

"Section B, 21. of Rules, Regulations and Recommendations for Water Utilities, is as follows: 'The municipal charge, if any, to open the street shall be paid by the applicant.'"

In re Elizabethtown Water Co.—Street Excavation and Replacing Pavements.

The answer then quoted a portion of the ordinance referred to and continued:

"After the applicant has the permission of the Street Commissioner under the ordinance, we make the tap, run the service pipe to the curb and install the curb box. The Street Department causes the excavation to be made and notifies the Water Company when the work is ready for the tap and the installation of the service pipe.

"If our interpretation of the law is wrong, we will be glad to know it, as we want to comply with the rulings of the Commission, and at the same time be within the law and the ordinances of the City of Elizabeth."

The matter was accordingly set down for a hearing on January 16th, 1918, to develop the facts from which the Board might come to a conclusion.

Counsel for the respondent and for the City of Elizabeth both stated that the rules of the Board should be observed and that the principal object sought to be obtained by the hearing was to arrive at a solution which would equitably consider the rights of all parties.

The Board's supplemental order in the matter of establishing standards and regulations to be followed by utilities supplying water for public use, effective June 21st, 1917, reads, in part, as follows:

"Upon making service connections, the tapping of the main shall be done and the curb cock (should read 'corporation cock') and couplings, the service lines from main to curb, curb stop-cock and couplings and curb box shall be furnished and placed by the utility or its agent at the expense of the utility.

"The municipal charge, if any, for permission to open the street shall be paid by the applicant.

"Whenever a tap is made through which regular service is not immediately desired, the applicant shall bear the entire expense of tapping the main, laying and maintaining the service pipes, couplings and connections, but shall be entitled to a refund for such part as the utility is hereinbefore required to assume, whenever regular service is begun."

The City Ordinance, effective July 1st, 1912, referred to by the respondent in his answer, reads, in part, as follows:

"AN ORDINANCE to regulate the opening of trenches and sewers, and connections therewith, in the public streets, avenues, lanes or highways, of the City of Elizabeth.

In re Elizabethtown Water Co.—Street Excavation and Replacing Pavements.

"Be It Ordained by the Mayor and City Council of the City of Elizabeth—

"Section 1. That hereafter, no opening, trench, sewer or connection therewith, which shall require excavations to be made in public streets, avenues, lanes, or highways of the City of Elizabeth, shall be made by any person or corporation, *provided* this ordinance shall not apply to any corporation having power or authority, under any act or acts of the Legislature, to lay and construct pipes and conduits in the said public streets, avenues, lanes or highways.

"Section 2. That hereafter such excavations or connections shall be made, and in case of sewer connections, pipes shall be furnished and laid, to a point six inches within the curb line, and the earth shall be properly backfilled by and under the direction of the Street Commissioner, upon application of any property owner or owners, or person or persons having authority to make such application, and upon the payment by such owner or owners, or person or persons having the authority to make such application, of the estimated cost of the work, and in addition thereto the sum of ten per cent. of the estimated cost of maintenance, *provided* that said owner, or owners, or persons making such application shall be entitled to have returned to him or them, any and all sums of money in excess of the cost of the work of making such excavations or connections, not including the ten per cent. aforesaid, and shall pay to the City of Elizabeth, any sum or sums of money said work shall cost in excess of the amount estimated and deposited with the Street Commissioner, and upon failure of said owner or owners, or other persons aforesaid, to pay said excess or deficiency, it shall be the duty of the City Attorney to institute proceedings in behalf of the City to recover the amount." (Sections 3 and 4 not quoted.)

It will be noted that the "municipal charge, if any, for permission to open the street shall be paid by the applicant," according to the Board's order. But this charge is the amount to be paid in connection with the clerical work incident to issuing and recording the written instrument and cannot be reasonably interpreted to include any part of the excavation of the street, necessary to be done before the service pipe can be laid, nor any part of the repaving of the street after the service pipe has been installed. The respondent's contention is not sustained by the words of the order nor by the Board's present interpretation thereof.

Nor can the Board agree with the respondent that the ordinance relied upon in its answer sustains the view that all of the cost of excavation and replacement of the pavement is necessarily to be imposed upon the owner of the property who may apply for the service of water. The terms of the ordinance very clearly indicate that not only the owner, but any person or persons having authority may make such application for the purpose of having excavations made for the installation of sewer or water pipes to connect any premises with the sewer or water system. Attention

In re Elizabethtown Water Co.—Street Excavation and Replacing Pavements.

is especially directed to Section 1 of said ordinance which appears to except utilities having general powers to open the streets from the remaining sections of the ordinance.

Moreover, it has been held by the Supreme Court of the United States that a water company is obligated, at its own expense, to connect its main with a service pipe of an owner of premises abutting on a street in which a main of the company has been laid, provided that the applicant brings his portion of the service to the curb line and wishes to take a regular supply of water. (*Consumers' Co. v. Hatch*, 32 Sup. Ct. Rep. 465; 224 U. S. 148.)

It would, further, appear to be a perfectly proper exercise of the powers conferred upon the municipal authorities for them to require by ordinance that, where possible and desirable, sewer and water pipes be installed in the same opening or trench; and it would appear to be in the interest of economy and also advantageous to all concerned that the cost of excavating and of replacing the paving, when done for more than one party, should be equitably apportioned among the parties required to pay for such opening, trench or repaving. It by no means follows that the entire cost must be borne by the water company when the excavation, as claimed by the respondent, is larger and more costly, by reason of the greater depth required by a sewer than by a water pipe. It is perfectly feasible to estimate the cost of each kind of opening and take the proportion that each bears to the sum of the two in order to apportion the cost for each; the same principle would apply if there were more than two parties interested in the apportionment. As it is probable that, in all cases, the cost of excavation for, and repaving over the sewer, will largely exceed that for the water connection, and as the sewer is, in Elizabeth, installed by a city department, it would appear reasonable that the city department should do the excavating and repaving and equitably apportion the reasonable cost thereof, to be paid by the water company in cases where a new service is concurrently installed for regular service of water; and, where regular service is not immediately required, to render such apportioned bill to the owner of the abutting property benefited by such service connection. When such service becomes active, the amount so paid to the city is to be refunded to the owner, or his assigns, as provided by the Board's order.

Borough of Metuchen vs. Lehigh Valley Railroad Co.

Counsel for the city referred to the provisions of Chapter 152 of the Laws of 1917, article 20, section 4, page 372, which empowers the municipality, when about to improve any street or highway, to require that the owners of abutting property install connections with water, gas or sewer mains, or conduits for wires when it would be otherwise necessary to tear up the proposed improved street and asked that the Board decide who should pay for such work. That is adequately provided for in the last paragraph of the order as above cited which provides that the entire cost of a tap through which regular service is not immediately desired shall be borne by the applicant (in this case the owner of the abutting property); but the applicant "shall be entitled to a refund for such part as the utility is hereinbefore required to assume, whenever regular service is begun." Whenever the city authorities require such services to be installed in advance of use, it is suggested that in each case a computation be made apportioning the costs of sewer and water connection laid in the same trench and such computation recorded for use whenever required to determine the facts, and separate bills rendered to the owner for sewer and water as suggested in the preceding paragraph. In this way the rights of all parties will be preserved.

After this interpretation of the Board's order, above cited, it does not appear necessary to enter a further order in this matter.

Dated February 15th, 1918.

No. 518.

BOROUGH OF METUCHEN

v.

LEHIGH VALLEY RAILROAD COMPANY.

1. Along each side of a railroad crossing is a ditch across which bridges have been constructed, one such bridge being 23 and the other 18 feet wide. The width of the used portion of the highway approaching the bridges is 24 feet.

Borough of Metuchen vs. Lehigh Valley Railroad Co.

2. The statutory duty of the railroad company is to construct and keep in repair good and sufficient bridges and passages over, under and across the railroad right of way so that public travel on said road shall not be impeded thereby, and said bridges and passages shall be of such width and character as shall be suitable to the locality in which the same are located.

3. Where the average travel is 6 vehicles and 13 pedestrians per hour and the bridges are amply wide enough for two vehicles to pass and repass at the same time, it is held that the bridges are of such width and character as to be suitable to the locality in which they are situated.

Frederic M. P. Pearse, for the petitioner.

Stewart C. Pratt, for the respondent.

The Borough of Metuchen filed its petition alleging that the Lehigh Valley Railroad Company, the respondent company, fails to perform its statutory duty to construct and keep in repair good and sufficient bridges and passages over and across its right of way where it crosses Durham Avenue at grade, in said borough, at the point called "Perth Junction Station," and praying for such relief as may be proper in the premises.

The respondent company answered denying most of the allegations of the petition and claiming that it performs its statutory duty in the premises.

Hearing upon petition and answer was had upon notice at Newark, New Jersey, Wednesday, January 2d, 1918. Testimony was taken and subsequently briefs submitted.

The petition is filed under Chapter 195, Laws of 1911, Public Utility Act, Section 17, which, among other things, provides:

"17. The Board shall have power, after hearing, upon notice, by order in writing, to require every public utility, as herein defined:

"(a) To comply with the laws of this State and any municipal ordinance relating thereto and to conform to the duties imposed upon it thereby or by the provisions of its own charter, whether obtained under any general or special law of this State."

The statutory duty which it is alleged the respondent company fails to perform is provided for in Section 26 of General Railroad Law, Revision of 1903 (P. L. 1903, p. 659; Comp. Stat., p. 4231):

Borough of Metuchen vs. Lehigh Valley Railroad Co.

"It shall be the duty of every railroad company owning, leasing or controlling any right of way for a railroad within this state, to construct and keep in repair good and sufficient bridges and passages over, under and across the railroad or right of way where any public or other road, street, or avenue now or hereafter laid, shall cross the same, so that public travel on said road shall not be impeded thereby, and said bridges and passages shall be of such width and character as shall be suitable to the locality in which the same are situated, &c."

It is not questioned in this proceeding but that it is the duty of the respondent company to comply with the provision of the railroad law cited. Nor is it questioned that if the Board should find and determine that the respondent company does not perform its statutory duty, at this crossing, the Board clearly has authority to require performance by the respondent company of the duties imposed by the general law, as well as any of its charter provisions relating thereto. *Metuchen v. P. R. R., P. U. R.*, Vol. III., p. 196; *Board of Chosen Freeholders of Passaic County v. N. Y., S. & W. R. R. Co.*, Rep. dated 10/4/17.

Therefore, whether as a matter of fact the respondent company has performed its statutory duty in the premises, based upon the proofs produced, is the question submitted.

The situation at this crossing appears (Exhibits R1-D and R3-a) to be substantially this:

Durham Avenue crosses the right of way of the respondent company practically at right angles, the right of way extending in a northwesterly and Durham Avenue in a northeasterly direction.

There are four tracks—two main line tracks and two sidings—and running along each side of the right of way of the respondent company is a ditch about four feet deep, through which some water flows. The respondent company, in order to afford passage thereover, has constructed over the ditch on the northeasterly side a three-inch plank bridge, twenty-three feet wide, with wooden guard rails at each end, and on the southwesterly side a brick arch bridge eighteen feet wide with a parapet wall at each end fifteen inches above the roadbed.

Durham Avenue is an important highway in said borough, being a direct road over said crossing to Perth Amboy. *The width of the highway on both sides of the railroad is forty feet; the used portion, however, is twenty-four feet wide.* Concrete sidewalks

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four feet wide have been laid on the southwesterly side of the railroad and on each side of the highway. In the vicinity of the crossing are two factories, a power house of the Public Service Corporation, and an Italian settlement located on the southwesterly side of the railroad, while on the northeasterly side is the main portion of the borough.

The counsel for the petitioner states in his brief that the principal causes of complaint are:

(a) No gates or flagman or other guards are provided at a crossing where vehicles and pedestrians are passing day and night and where freight trains are constantly drilling back and forth.

(b) An unsafe rise and declivity on the crossing over the wooden bridge and Pennsylvania railroad connecting siding, particularly unsafe for vehicles, both horse and motor drawn or driven.

(c) Narrowness of the bridges over the ditches, particularly the brick arch bridge where the road curves.

(d) No provision whatsoever for pedestrians and no means of crossing directly from the sidewalks constructed on the west side of the railroad tracks.

(e) Obstruction of view of the tracks by the railroad passenger station and freight station and cars standing on the sidings.

(f) Stagnant and unwholesome water remaining in the ditches, particularly in the summer time.

The question involved is not whether the Board is of the opinion that the situation is the best that could be planned. It frequently happens that a more desirable situation could be provided. The Board in the instant proceeding is to determine whether the existing conditions are a compliance with the statutory duty imposed upon the respondent.

The statutory duty imposed is: To construct and keep in repair good and sufficient bridges and passages over, under and across the railroad right of way, *so that public travel on said road shall not be impeded thereby, and said bridges and passages shall be of such width and character as shall be suitable to the locality in which the same are situated.*

The mere fact that the highway is wider than the bridge or passageway is not enough. The test is whether public travel is im-

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peded, or whether the bridge and passage is of such a width so as not to accommodate *public travel* at its location. If such is the fact then the duty imposed by the statute has not been performed. It depends upon the situation in each case.

In *Metuchen v. Pennsylvania Railroad Co.*, 71 N. J. E. (1 Buch. 404), the Court of Chancery decreed, *inter alia*, that the company must maintain the roadway of the width of its layout, to wit, sixty-six feet, instead of forty-five feet. The roadway has been, and now is, maintained at a width of forty-five feet.

The Court of Errors and Appeals in reversing the finding of the Court of Chancery on this point, 73 N. J. E. (3 Buch. 359), held that the company need not maintain the roadway under the bridge for its entire width, but must construct and keep in repair a bridge of sufficient width to *provide suitable passage for persons and vehicles desiring to use the street*.

The court (at p. 363) said:

"The duty imposed is: 'To provide a substitute for that which is necessarily and lawfully taken away, and the law requires no more than that such substitute shall be sufficient to accommodate public travel at its location.'"

In *State v. Lackawanna Railroad Co.*, 84 N. J. L. 289, Mr. Justice Garrison, delivering the opinion of the Court of Errors, pages 290 and 291, said:

"The Lackawanna Railroad Company of New Jersey was indicted and convicted for maintaining a nuisance in a public street in the Borough of Andover by erecting in said street the abutments for an overhead bridge by which its tracks were carried over and across such public road. These abutments were erected in the public road and encroached upon each side of it to the extent of four and one-half feet, thereby reducing the road from its legal width of thirty-three feet to an actual width of twenty-four feet. These facts having been shown by the state and not controverted by the defendant, its counsel offered in its defence to prove the number of vehicles that used the public road at this point and other facts tending to show that the passage constructed beneath the bridge and between the abutments was of a width and character suitable to the locality, and that the travel on such road would be in no way impeded. This defence was made upon the theory that such was the measure of the defendant's statutory duty under the twenty-sixth section of the General Railroad law, and that if it had performed its statutory duty it could not be guilty of maintaining a nuisance.

"The trial judge, conceiving that it was the duty of the defendant to bridge the entire width of the highway, refused to admit the testimony and charged the jury in effect that their verdict must be against the defendant."

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And, again, at pages 296 and 297:

"The statute, therefore, applied to the plaintiff in error and if at the trial it could have satisfied the jury that the passage it had constructed was of a width and character suitable to the locality, it was not guilty of maintaining a nuisance. It was error, therefore, to refuse to admit the testimony that was offered, and for this reason the judgment of the Supreme Court is reversed in order that there may be a venire de novo."

It will be seen that the court related the question of "width and character suitable to the locality," to the question of use and safety.

The borough insists that the travel at the point in question is such as to show clearly that the bridge or passageway is insufficient for public travel.

The petitioner caused a traffic count to be taken. The count was made on September 4th, 1917 (Tuesday), for twenty-four-hour period. The witnesses actually making the count were produced. A tabulation of the count shows:

Bicycles, 30.	Pedestrians, 330.
Saddle horses, 6.	Wagons, 79.
Automobiles, 43.	Passengers in vehicles, 201.

The respondent company also caused a count to be taken on September 14th and 15th, 1917 (Saturday and Sunday), and for a forty-eight-hour period, and shows:

Automobiles, 50.	Wagons, 56.
Bicycles, 15.	Pedestrians, 304

This indicates less travel than petitioner's count. However, witnesses taking the count were not produced, nor was any supporting data offered, and it finally was admitted under the objection.

But even accepting the count as taken by the petitioner, it shows an average of about 6 vehicles and 13 pedestrians per hour, and, combining pedestrians and people in vehicles, about 22 people per hour, during the twenty-four-hour period.

Moreover, there was no testimony, except, perhaps, some general statements, that public travel was impeded in crossing the bridges, i. e., there was no testimony that vehicles collided, that

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pedestrians were injured or inconvenienced, that vehicles congested or that delays occurred at this crossing.

The bridges, as already stated, are twenty-three and eighteen feet wide, respectively; amply wide enough for at least two vehicles to pass and repass at the same time. There was no allegation that the bridges are unsafe except as to their width.

Applying the test, as laid down by the cases cited, that the passage shall be sufficient to accommodate public travel at its location, in view of the limited travel as disclosed by the testimony, the Board concludes that for the present, at least, the bridges and passages are of such width and character as to be suitable to the locality in which they are situated.

The Board, therefore, finds and determines that the case as submitted does not warrant any order at this time.

The conclusion, then, would seem to dispose seriatim of the complaints enumerated by the petitioner, except those relating directly to grade crossing protection and also the one respecting the accumulation of "stagnant and unwholesome water" in the ditches. It would appear that as to the latter matter the Board has no power.

As to protection at the crossing, it is pointed out an investigation has been made, and the recommendation (August 30th, 1917) was that on account of the obstruction by cars on the siding, an automatic alarm bell should be installed. The respondent company at the hearing assured its willingness to comply therewith.

The petition will therefore be dismissed and an order will be entered.

Dated February 18th, 1918.

ORDER.

This case being at issue upon complaint and answer on file and having been duly heard and submitted by the parties, and full investigation of the matters and things involved having been had, and the Commission having, on the date hereof, made and filed a report, containing its findings of fact and conclusions thereon, which said report is hereby referred to and made a part hereof.

IT IS ORDERED that the complaint in this proceeding be and it is hereby DISMISSED.

Dated February 18th, 1918.

Joseph Freedman Co. vs. Central Railroad Co. of New Jersey.

No. 519.

JOSEPH FREEDMAN COMPANY

v.

CENTRAL RAILROAD COMPANY OF NEW JERSEY.

To enable the Board to order a railroad company to construct and maintain a switch connection with a private side track, it is necessary to establish the conditions prescribed by the statute that the proposed connection would be "reasonable and practicable and can be put in with safety and will furnish sufficient business to justify the construction and maintenance of the same."

John J. Stamler, for the petitioner.

Charles E. Miller, for the respondent.

The petitioner applies for an order directed to the respondent to maintain and operate a switch connection to a siding which the petitioner proposed to construct to connect with the railroad operated by the respondent. The power of the Board in the matter is set forth in the act creating it, as follows:

(Sec. II, 16) "The Board shall have power:

* * * * * * *

"(k) After hearing, upon notice, by order in writing, * * * * * to direct any railroad, street railway or traction company engaged in carrying merchandise to construct, maintain and operate upon reasonable terms, a switch connection with any private side-track, which may be constructed by any shipper to connect with the railroad or street railway where, in the judgment of the board, such connection is reasonable and practicable, and can be put in with safety, and will furnish sufficient business to justify the construction and maintenance of the same." Chapter 195, Laws 1911.

A hearing of the matter was held by the Board at which the petitioner and the respondent appeared. A state of facts agreed to by the respondent was presented by the petitioner. The respondent contended that the matter was without the jurisdiction of the Board. The agreed facts lack the necessary elements of

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proof required by the statute to move the Board to make the order prayed for. To enable the Board to exercise its judgment, as required by the statute, it is necessary to establish that the proposed connection would be "reasonable and practicable, and can be put in with safety, and will furnish sufficient business to justify the construction and maintenance of the same."

The jurisdiction of the Board not being affirmatively exercised, it does not become necessary to pass upon the question raised by the respondent.

The petition will therefore be dismissed.

Dated February 18th, 1918.

No. 520.

BOARD OF EDUCATION OF TOWN OF MORRISTOWN

v.

PROPRIETORS OF THE MORRIS AQUEDUCT.

A water company supplied water to a contractor building a public school upon receipt of application signed by the President of the Board of Education, said application containing an agreement to become responsible for payment for all water used. The Board of Education later denied responsibility and showed that the guarantee had not been authorized. Held:

1. The unpaid bill of the contractor cannot be regarded as a bill owing by the Board of Education, and the water company would not be justified in refusing to supply water to the school house when application for such supply is made to the company by the Board of Education.

2. The question of the obligation, if any, resting upon the President of the Board of Education to pay for water supplied to the contractor, for which payment was not made, would have to be settled in a court of competent jurisdiction. The Commission is not the tribunal to determine the merits and direct the settlement of such a controversy.

C. F. Wilson, for the Board of Education of Morristown.

F. V. Pitney, for the Proprietors of the Morris Aqueduct.

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Complaint was made to the Board, by the Board of Education of the Town of Morristown, that the Proprietors of the Morris Aqueduct, a water company supplying water for public use, furnished water to a contractor who was building a new public school building in the Town of Morristown; that the contractor became financially embarrassed and discontinued the work, owing a bill to the water company; that the water company turned off the water at the building and declined to furnish water to a new contractor, with whom the Board of Education contracted for the completion of the building, unless the said Board of Education should pay the debt of the former contractor. It was claimed that the Board of Education should not be expected to pay the debt owing the water company by someone else.

In reply to this the respondent submitted a copy of an application requesting the company to tap its water main

"in Atno Avenue and lay a three-inch service pipe to inside cellar wall to supply a High School Building at corner Atno Avenue and Early Street on land owned by the undersigned. * * * * * The undersigned hereby agrees to become responsible for the prompt payment of all water used for building purposes.

"Board of Education of the Town
of Morristown in the County
of Morris,

"by JOSEPH HINCHMAN,

"President."

The foregoing is copied from the application.

The respondent claims that the Board of Education, through the signing of this request by its President, became the applicant for the service furnished for the use of the contractor in building the school; that the Board of Education was the only party to whom the company looked for payment for water supplied; that if it

"had suspected that the Board of Education would repudiate its guarantee, we would not have furnished water for the construction of the building without a deposit or other security. We have no desire to embarrass the Board of Education in any way, but assume that your board expects us to enforce payment of this bill in the same way as against an individual."

It appears that the respondent has made a satisfactory arrangement with the contractors, later employed to build the school, that

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water will be supplied so long as it is required by the contractors for this purpose, but that when water is desired by the Board of Education for use in the school, the company, in the absence of a ruling by this Board, would refuse to supply the same.

The Board has approved the adoption by water companies of a rule which provides that—

"If a bill remains unpaid for a period of over fifteen days after mailing or presentation, notice will be served or mailed that unless the bill is paid within seven days from the date of such notice, the water supply will be discontinued. When the water is turned off under such conditions, it will remain off until the amount owing is paid in full or until satisfactory arrangements for payment have been made."

Unjust and unreasonable discrimination against the customers of a public utility are prohibited by law and the company claims it cannot supply service to the Board of Education, with the bill unpaid, and enforce the rule quoted above upon other customers without undue discrimination.

It is claimed by the Board of Education that it did not authorize its President to apply to the company for water for use in building the school, or to agree to become responsible for the payment of the water used for building purposes.

Upon the issue joined hearing was called by the Board, of which the Board of Education and the Proprietors of the Morris Aqueduct were given notice. Testimony, including that of Mr. Hinchman, was submitted at the hearing in support of the statement that the Board of Education did not authorize an application to the water company to supply water to the contractors, and did not give Mr. Hinchman authority to bind the said Board to become responsible for payment for water used for building purposes. That no such authority was given appears to be borne out by the testimony.

It is further claimed by Mr. Hinchman that there was a verbal understanding with the representative of the water company that no liability would be incurred by signing the application; that the application was filled out when submitted to him for his signature; that he did not read the application but relied on the assurance given that he was not obligating the Board of Education. He claims, furthermore, that the bill is excessive in amount.

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The water company, on the other hand, denies that there was an understanding that the Board of Education should not be responsible for payment for the water used, and claims that the amount of the bill is correct.

From the testimony adduced at the hearing the Board is of the opinion that whatever impression may have been made upon the mind of the representative of the water company as to the responsibility incurred by the Board of Education through the signing of the application by Mr. Hinchman as President, and whatever may be the facts as to the extent of the obligation which Mr. Hinchman may have incurred as the result of signing the application, the application so signed cannot be regarded as binding the Board of Education. The bill unpaid, therefore, cannot be regarded as a bill owing by the Board of Education and the company would not be warranted in refusing to supply water to the school house when application for such supply is made to the company by the Board of Education.

The question of the obligation, if any, resting upon Mr. Hinchman to pay for water supplied to the contractor for which payment has not as yet been made, if an amicable understanding cannot be reached between Mr. Hinchman and the water company, would have to be settled in a court of competent jurisdiction. The Board is not the tribunal to determine the merits and direct the settlement of such a controversy. It is understood that the respondent is willing to accept the findings of the Board as to its responsibility with respect to supplying water on the application of the Board of Education. Therefore, no order in the matter will be entered.

Dated February 20th, 1918.

In re Whitesboro—Permission to Extend Street Across Tracks.

No. 521.**IN THE MATTER OF THE APPLICATION OF CITIZENS OF WHITESBORO FOR PERMISSION TO EXTEND ANNA STREET ACROSS THE TRACKS OF THE ATLANTIC CITY RAILROAD COMPANY AT GRADE.**

To establish a new crossing at grade, permission must first be obtained from the Board, and, on account of the danger to travel at grade crossings, before such permission can be given evidence as to the public necessity for additional crossings must be conclusive.

George H. White, for the Citizens of Whitesboro.

W. L. Kinter, for the Atlantic City Railroad Company.

Application is made by the citizens of Whitesboro for permission to extend Anna Street, in Whitesboro, across the tracks of the Cape May Division of the Atlantic City Railroad.

Whitesboro has a permanent population of about two hundred, which number is increased during the summer season. The majority of buildings are located on the easterly side of the right of way of the railroad, in which section are two churches, school house, post office and general store. Running parallel with the line of the railroad on the easterly side is the principal thoroughfare, known as County Road, and at right angles with this highway is Main Avenue, about the center of Whitesboro. The Atlantic City railroad runs in a northerly and southerly direction through Whitesboro, as does the Cape May division of the West Jersey and Seashore railroad. The latter railroad is located about 1,800 feet west of the Atlantic City railroad. Main Avenue extends across the tracks of both railroads. Anna Street lies to the south of Main Avenue, distant about 700 feet. It is not an improved highway, some work having been done shaping lines of the highway. On the westerly side of the Atlantic City railroad are several unimproved streets parallel with the railroad, all of which will cross Main Avenue at right angles. Some six or eight houses

In re Whitesboro—Permission to Extend Street Across Tracks.

are located in the section south of Main Avenue and west of the Atlantic City railroad tracks. It is claimed that a crossing at Anna Street is necessary, not only to provide a more convenient route from the western section south of Main Avenue to the built-up portion east of the track, but also for travel to points between Whitesboro and the bay shore of the Delaware River. Plan of highways submitted at the hearing and marked as an exhibit shows that travel between said points from Whitesboro could be accommodated by using the crossing at Main Avenue, and from the testimony it does not appear that an additional grade crossing 700 feet south from Main Avenue is necessary to afford a more convenient route for the accommodation of travel between Whitesboro and bay shore points or for the amount of travel from the section immediately west of the railroad along Anna Street to and from the section east of the railroad.

To establish a new crossing at grade, permission must first be obtained from the Board, and on account of the danger to travel at grade crossings, before such permission can be given, evidence as to the public necessity for additional crossings must be conclusive. Owing to the small number of residents in Whitesboro and the immediate vicinity, the extent of travel that would pass over a crossing at Anna Street, and which travel can be accommodated at Main Avenue crossing 700 feet distant, it cannot be concluded that an immediate necessity exists for an additional crossing. Permission for crossing at grade at Anna Street will therefore be denied.

Dated February 20th, 1918.

In re Upper Twp.—Permission to Extend Drive Across Tracks.

No. 522.**IN THE MATTER OF THE APPLICATION OF TOWNSHIP COMMITTEE
OF UPPER TOWNSHIP FOR PERMISSION TO EXTEND BAYVIEW
DRIVE ACROSS THE TRACKS OF THE ATLANTIC CITY RAIL-
ROAD AT GRADE.**

Permission to construct a new crossing at grade is granted where it appears that the free use of a highway is necessary to afford accommodation and convenience for travel; that the absence of this will materially affect the growth of a community and that a railroad crossing at grade is essential to such use.

Morgan Hand, for Upper Township.

W. L. Kinter, for the Atlantic City Railroad Company.

Application is made by the Township Committee of Upper Township for a crossing at grade over the Sea Isle City Branch of the Atlantic City Railroad at Strathmere. The municipality covers a narrow strip of land lying between the ocean and the sound, in Ocean City. Paralleling the sound shore is a highway known as Bayview Drive. A portion of this highway north of Vincent Street is open to a point near the northerly boundary limit, also a portion south of said street. The intersection of Vincent Street and Bayview Drive is crossed by the branch track of the railroad, and at said point it is desired to locate a grade crossing.

Previous petitions to establish a grade crossing at said location have been denied by the Board, and opportunity was given for a rehearing to permit the presentation of testimony regarding conditions differing from those heretofore presented. Since the prior hearings, the community has developed in some respects. From Ocean City north of Strathmere a highway is under construction between said point through Strathmere to Sea Isle City. Additional buildings have been constructed on Bayview Drive, and considerable money has been expended by the township improving said avenue. Plan of Strathmere submitted by the petitioner shows two highways running north and south paralleling the adjoining tracks of the Atlantic City railroad, Pennsylvania

In re Upper Twp.—Permission to Extend Drive Across Tracks.

railroad and the Electric railroad. The Pennsylvania railroad extends to the northerly boundary line, crossing Corson's Inlet, and the Atlantic City railroad curves at Vincent Street crossing the sound in a westerly direction. Fishing piers, boat houses, club houses and residences are located along Bayview Drive, the majority of these being north of Vincent Street. A lumber yard, garage and other buildings are located south of this highway. There are now grade crossings of the railroad right of way at Willard Road in the northerly section, and at Sumner Road, the distance between the highways being about 1,000 feet. To reach the portion of Bayview Drive north of Vincent Street from the southerly portion, it is necessary to cross the tracks at Sumner Road to Commonwealth Avenue, north to Willard Road; thence south to points on Bayview Drive. The station of the Atlantic City railroad is located at Sumner Road, and from the section north of Vincent Street on Bayview Drive it is necessary to use the reverse of same route to reach the station.

Strathmere is a summer resort. Its development as a resort is principally due to the facilities for boating and fishing, and practically all the buildings along the sound shore are used for such purposes. The free use of a highway close to and paralleling the sound is necessary to afford accommodation and convenience for travel, and the absence of this will materially affect the growth of the community. During the past two years, the township has improved the condition of Bayview Drive, and expenditures for further improvement would not be warranted unless the portion of the highway at Vincent Street could be utilized.

Train movements on the Sea Isle City branch are few in number, and speed of trains is limited approaching Bayview Drive on account of the curve and the drawbridge over the sound. The views of trains from the approaches on Bayview Drive are fair, and, with slow speed of trains, the element of danger to travel on the highway is not, under the circumstances, such that it can be reasonably regarded as superseding the necessity for the crossing.

While it is the policy of the Board to eliminate existing crossings wherever possible, rather than create new crossing at grade, consideration should be given to certain highway situations, which, viewed from the standpoint of convenience and public necessity, require the establishment of a crossing at grade.

In re Seashore Gas Co. of Sea Isle City—Increase of Rates.

In view of the present development, contemplated improvements and changed conditions since this matter was previously heard, the Board will grant permission for a crossing over the tracks of the Atlantic City railroad at grade on Bayview Drive, and a certificate will issue accordingly.

Dated February 20th, 1918.

No. 523.

**IN THE MATTER OF THE APPLICATION OF THE SEASHORE GAS
COMPANY OF SEA ISLE CITY FOR INCREASED RATES, PRO-
POSED TO BE EFFECTIVE ON MARCH 1ST, 1918.**

A gas company asked for an increase in its rate for gas from \$1.50 per 1,000 cubic feet to \$3.50 per 1,000 cubic feet, claiming such increase is required to enable it to obtain sufficient revenue to continue operations. Held:

1. The price would be excess of the value of the service and would not be because of decreasing number of customers afford the revenue anticipated.

2. A company buying a plant for \$8,500 should not charge 10% per annum for depreciation upon an original cost of \$33,000.

3. The amount of \$10,000 is reasonable as a base for determining a schedule of rates where the property cost the owners at receiver's sale \$8,500 and property valued at \$443.59 has been added.

4. A return of six per cent. per annum on the base is reasonable after making proper deductions for operating expenses and depreciation.

Michael A. Maloney, for the petitioner.

Richard W. Cronecker and *Eugene C. Cole*, for the objectors.

This company gave notice that it would discontinue the manufacture and sale of gas on October 15th, 1917, but, after notice and hearing, was, on November 3d, 1917, ordered to continue such service. On February 5th, 1918, it failed to send out gas on its system, but resumed service shortly thereafter. On or about February 18th, the company applied for a receiver, but the court continued the matter pending an application to this Board for increased rates to enable it to continue the manufacture and sale of

 In re Seashore Gas Co. of Sea Isle City—Increase of Rates.

gas in order that the community may not be deprived of service.

The company accordingly filed the following schedule of rates with this Board:

For gas supplied to private consumers—\$3.50 per thousand cubic feet.

A minimum charge of \$1.50 per month will be made to all consumers.

All bills for gas consumed are payable five days after presentation. If not paid within that time, a penalty of five per cent. will be added.

If bills are not paid within ten days after presentation, the gas will be turned off and meters removed from premises. Service will not be resumed except upon payment of \$1.00 for turning on gas.

A deposit of \$10.00 will be required from all except yearly consumers, this deposit to be returned when service is discontinued and all bills due the company are paid.

A charge will be made for all alterations and repairs requested by consumers for which the Company is not responsible.

Gas supplied to municipalities to be the subject of special contract; otherwise to be at same rate and upon same terms as apply to private consumers.

It will be noted that the company asks for an increase in the metered rate for gas of from the present rate of \$1.50 per 1,000 cubic feet to a new rate of \$3.50 per 1,000 cubic feet, seeking to justify its application about as follows:

Operating expenses for the year 1917.....	\$7,271
Interest on capital	540
Depreciation, 10% per annum on \$33,000 (the original cost of the plant, which the applicant bought for \$8,500, however).....	3,300
Total annual revenue sought to be obtained.....	\$11,111
Deduct sundry sales	240
Revenue from the sale of gas.....	\$10,870
Deduct the amount paid for street lamps, 1917, about.....	1,580
Revenue from sales of gas through meters.....	\$9,290
Resulting cost per 1,000 cubic feet of gas, on basis of 2,722,000 cubic feet sold	3.41

But if the company should receive a revenue of \$11,111, and should appropriate \$3,300 per annum to provide for accruing depreciation of plant and property, in a period of only three years, it would have recovered from its customers its entire investment of, say, \$10,000 (if we include \$1,000 of its losses as intangible value), and it would have received on its actual diminishing in-

In re Seashore Gas Co. of Sea Isle City—Increase of Rates.

vestment upwards of 10% per annum during the same three years. Thereafter it would receive a profit of \$3,840 a year without having a cent of its own capital at risk. On the other hand, it is very doubtful if such a result would ever be attained through charging a rate of \$3.50 per 1,000 cubic feet. Under the law of diminishing returns, the people would find the price to be far in excess of the value of the service, and the company would not receive the revenue estimated in the above calculation.

REVENUE AND GAS CONSUMPTION DURING 1917.

The company claims that the revenue for 1917 totaled \$5,903 which may be apportioned about as follows:

	<i>Amount.</i>	<i>M. Cu. Ft. of Gas.</i>
Sales through prepaid meters.....	\$869	459
Sales through ordinary meters.....	3,394	2,263
	<hr/>	<hr/>
	\$4,083	2,722
Sales through municipal street lamps.....	1,580	*756
	<hr/>	<hr/>
Total gas sales.....	\$5,563	3,478
Sundry sales	240	....
	<hr/>	<hr/>
Total operating revenue.....	\$5,903	3,478

*Company's estimate of same lamps in 1916 annual report.

It would appear that the estimate of 756 M. cu. ft. of gas for street lights is too small. The same installation was estimated to consume, by the preceding management, during 1914, 1,766 thousand cubic feet instead of 756 thousand cubic feet shown above. The contract calls for 42 lamps of an illuminating power equal to 60 watt electric lamps, which may be produced by a consumption of about 4 feet per hour per lamp; and it calls for 12 lamps of an illuminating power equal to a 400 watt electric lamp, which may be estimated to require 12 feet of gas, though this amount is probably too small. The lighting schedule required by the contract is from dusk to dawn, commonly assumed to require 4,000 hours a year per lamp. The 42 lamps would require, then, 16,000 cubic feet a year each, or 672 thousand cubic feet for 42; the

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12 lamps would require 48 thousand cubic feet each, or 576 thousand cubic feet for 12; this gives an annual consumption of 1,248 thousand cubic feet a year, instead of 756 thousand cubic feet estimated by the company, an excess of 492 thousand cubic feet a year.

This estimate is, in a measure, confirmed by the company's estimate of the plant output, with two months estimated by the Board's engineer on the basis of the preceding ten months. This is as follows:

January	244,300 cu. ft.
February	203,600
March	234,000
April	228,800
May	231,900
June	329,500
July	654,800
August	981,100
September	624,500
October	254,100
November (estimated)	200,000
December	180,400
<hr/>	
Total, 1917	4,367,000
Unaccounted for gas, 9.00%	397,000
<hr/>	
Gas sales	3,970,000

As it is usual to allocate the cost of plant and mains in proportion to the gas used by the classes of consumption, it is apparent that, on the basis of the company's estimate of gas used by street lamps, metered customers should bear 78 per cent. of such costs; if the street lamps consumption of 1,248 thousand cubic feet were adopted, the percentage would be 70 per cent. for meters. It is probable, however, that the metered consumption, during a period of 5 years, will increase much more rapidly than the use through street lamps; 78 per cent. will, therefore, be used for such allocation in what follows.

In re Seashore Gas Co. of Sea Isle City—Increase of Rates.

TOTAL REVENUE TO BE ALLOWED THE COMPANY.

Premising the efficient and economical management, it will be assumed that the company is entitled to 6 per cent. return on \$10,000 of capital, annual depreciation thereon based on assumed lives in service of its various classes of service, as shown more in detail in Table I., and its fair operating expenses, taking the operations of the year 1917 as more nearly representing the conditions apt to prevail in the near future.

I. CAPITAL USED AND USEFUL.

The Standard Gas Company of South Jersey installed the plant now operated by the applicant, and began the service of gas on July 11th, 1913. In its annual report to the Board, as of December 31st, 1913, it claimed the cost of its Fixed Capital to be \$33,103.48. This company was not successful and its property was acquired by the applicant at a receiver's sale for \$8,500, to which was added \$443.59 in property up to December 31st, 1916. The company claims to have lost \$2,300 in operating the plant up to October 31st, 1917. Substantial justice will be done, in the opinion of the Board, if \$10,000 be taken as a base for the purpose of determining a schedule of rates; this is set up in Table I., which also shows the annual depreciation on the various classes of property, the estimated life in service of each class, and the allocation of the depreciation to metered sales and municipal street lamps.

 In re Seashore Gas Co. of Sea Isle City—Increase of Rates.

TABLE I.

PROPERTY USED AND USEFUL, AND THE ANNUAL DEPRECIATION THEREON.

(Annual Depreciation Is Allocated to Classes of Service.)

Acc. No.	Items.	Cost of Property.	Annual Depreciation in		Allocated to	
			Per cent.	Amount.	Meters.	Lamps.
101	Land	\$252	0	000	...	...
107	General equipment ...	15	10	\$2	...	...
108	Works and station structures	2,506	3	75	...	...
109	Holders	1,326	4	53	...	...
110	Furnaces and boilers..	196	6	12	...	...
115	Water gas sets and ac- cessories	1,326	5	65	...	...
116	Purification apparatus,	332	5	16	...	...
117	Acces. equipment at works	813	5	40	...	...
118	Trunk lines and mains,	2,592	3	78	...	...
123	Gas tools and imple- ments	110	10	11	...	...
Property used by me- ters and street lamps in common						
		\$9,468	3.72%	\$352	*\$275	\$77
120 } 121 }	Gas meters installed..	357	6	21	21	...
122	Street lamps (ser- vices)	175	10	17	...	17
Total—Capital...		\$10,000—Depreciation,	\$390		\$296	\$94

*Allocated in proportion to gas used, that is, 78% to meters and 22% to lamps.

ALLOCATION OF PROPERTY TO CLASSES OF SERVICE.

Of the \$10,000 of property shown in Table I., \$9,468 is used in common; 78 per cent. thereof is allocated to meters, to which is added \$357 for the directly distributed cost of meters, making a total capital used for meters of \$7,742; this leaves \$2,258 to be allocated to street lamp service.

In re Seashore Gas Co. of Sea Isle City—Increase of Rates.

OPERATING EXPENSES AND TAXES.

The next item taken up is that of Operating Expenses and Taxes. These will be shown for 1916 and 1917, as reported by the company (with the apportionment of a few items in November and December, 1917, estimated), and, for comparison, is also shown a statement of the Operating Expense and Taxes of the Medford Gas Company, whose output and system is almost identical with that of the Seashore Gas Company, except that its gas is distributed at low pressure. Costs per 1,000 cubic feet are given on corrected basis of 1,248,000 cubic feet sold for street lamps in 1916 and 1917 and not on basis of 756,000 cubic feet estimated by the company.

In re Seashore Gas Co. of Sea Isle City—Increase of Rates.

TABLE II.

SHOWING REVENUE DEDUCTIONS OF THE SEASHORE GAS COMPANY FOR 1916 AND 1917, AND THE SAME ITEMS FOR THE MEDFORD GAS COMPANY FOR 1916 FOR COMPARISON.

Acc. No.	Items.	Seashore Gas Company.				Medford Gas Company.	
		Year 1917.		Year 1916.		Year 1916.	
		Per M.		Per M.		Per M.	
		Cu. Ft. Sold.		Cu. Ft. Sold.		Cu. Ft. Sold.	
		Cents.	Amount.	Cents.	Amount.	Cents.	Amount.
	<i>Production expense.</i>						
410	Works, Supt. and labor	17.26	\$685	15.74	\$671	16.38	\$700
413	Boiler fuel	25.64	1,018	12.11	516	9.96	426
414	Water	4.51	179	4.86	207	....	....
417	Generator fuel....	25.82	1,025	21.72	926	12.71	543
418	Water gas oil....	30.73	1,220	23.34	995	26.70	1,141
420	Misc. supplies and expense	0.65	26	2.18	93	1.09	47
430	Repairs at works..	7.96	316	17.55	748	5.13	219
	Subtotal	112.57	\$4,409	97.50	\$4,156	71.97	\$3,076
440 }	Distribution ex-						
450 }	pense	19.80	786	15.27	651	6.61	283
460	Street lamp operating expense...	20.81	826	19.68	839	8.26	353
470	Commercial expense	7.25	288	4.73	202	....	....
475	Promotion expense.	0.05	2	0.14	6	....	....
481 }	General expense...	11.60	464	9.31	396	10.42	445
495 }							
	Total operating expense	172.17	\$6,835	146.63	\$6,250	97.26	\$4,157
	Taxes	10.98	436	9.17	391	8.82	377
	Total revenue deductions	183.15	\$7,271	155.80	\$6,641	106.08	\$4,534
	Gas sold, <i>corrected</i> , M. Cu. Ft.....	....	3,970	....	4,262	....	4,274
	Gas made, <i>estimated</i> , M. Cu. Ft.,	....	4,367	....	4,688	....	4,642

In re Seashore Gas Co. of Sea Isle City—Increase of Rates.

A comparison of the costs of operating these two companies, in the fairly normal year of 1916, shows very unfavorably for the management of the Seashore Gas Company. The testimony shows that a manager is employed the year round, by the latter company, at an expense of \$1,300; that a gas maker is employed at an expense of \$85 a month, or \$1,020 a year; the sum of these two items is \$2,320, which seems to be excessive for a plant making only 180,000 or 200,000 cubic feet of gas in December, to serve only about 60 customers. This consumption requires only one hour's generating capacity of the plant per day for six months in the year. It would certainly appear that under efficient and careful management this could be covered by \$1,500, and \$820 a year saved. Moreover, the amount of boiler and generator fuel used seems excessive, even for a small plant. The boiler fuel used by the Seashore Gas Company for 1916 was 74 pounds per 1,000 cubic feet on corrected basis of gas sold, against 57.8 pounds used by the Medford Gas Company, and the generator fuel used was 73 pounds and 62.2 pounds, respectively. The Seashore Gas Company, however, uses boiler fuel for running a gas compressor, which would account for a difference of about four or five pounds per 1,000 cubic feet. But even so, the applicant used 20% more fuel than did the Medford Gas Company, which produced almost exactly the same quantity of gas in 1916. This difference, added to the \$820 above indicated, would have saved about \$1,100. The station repairs and distribution expenses are also unduly high, but it is possible that some of this is a duplication of the \$1,100 pointed out above. This would indicate that economies may be effected by the directors of the applicant which will offset any increased proper manufacturing expenses and taxes to be expected in 1918.

In Table III. is shown an allocation of 1917 revenue deductions to metered gas sales and municipal gas sales, using 78% for metered gas and 22% for municipal lamps for production expenses and taxes.

In re Seashore Gas Co. of Sea Isle City—Increase of Rates.

TABLE III.

SHOWING THE ALLOCATION OF REVENUE DEDUCTIONS TO SALES OF GAS THROUGH METERS AND MUNICIPAL STREET LAMPS RESPECTIVELY.

(Based on Company's Estimate of Consumption.)

Items	Total De- ductions. Amount.	To Meters. Amount.	To Street Lamps	
			Amount.	How Allocated.
1. Production expense	\$4,469	\$3,486	\$983	22%
2. Distribution expense	786	676	110	\$2 per lamp.
3. Street lamp expense.....	826	....	826	100%
4. Commercial expense	288	276	12	\$1 per month.
5. Promotion expense	2	2	....	.....
6. General expense	464	372	92	20%
7. Taxes	436	340	96	22%
Total deductions	\$7,271	\$5,152	\$2,119	29% Wtd. Avg.
Metered gas, average cost per 1,000 cu. ft. (2,722 total) ..	....	\$1.89	....	.....
Municipal street lamps, after deducting \$826 for main- tenance and rentals (\$756, company's estimate) .....	....	....	\$1.71	.....
Ditto (1,248 estimate) .....	....	....	1.03	.....

In Table IV. will be shown the 6% interest on capital as here-
inbefore allocated, the depreciation as shown in Table I., and the
revenue deductions as shown in Table III.

TABLE IV.

COST OF FURNISHING GAS, ALLOCATED TO METERED SALES AND TO MUNICIPAL STREET LAMPS RESPECTIVELY.

(Based on 1917 Experience.)

Items.	Total Amount.	Metered Gas Sales— Per M.		Street Lamp Sales.
		Cu. Ft.	Amount.	Amount.
1. Capital	\$10,000	\$2.8442	\$7,742	\$2,258
2. Interest on (1) at 6%.....	\$600	\$0.1708	\$465	\$135
3. Depreciation, Table I.....	390	0.1088	296	94
4. Revenue deductions, Table III...	7,271	1.8927	5,152	2,119
5. Total operating revenue.....	\$8,261	\$2.1723	\$5,913	\$2,348
6. Deduct sundry sales.....	240	0.0881	240	.....
7. Gas revenue	\$8,021	\$2.0842	\$5,673	\$2,348

In re Seashore Gas Co. of Sea Isle City—Increase of Rates.

If only \$300 be saved with respect to the manager's salary, over and above the increased costs likely to prevail in 1918, the above table indicates that the company can earn 6% on \$10,000, provide a proper annual depreciation thereon, and earn operating expenses allowed on a liberal basis, and yet sell gas through meters at a rate of two dollars and ten cents gross, subject to ten cents discount for prompt payment, especially in view of the revenue to be derived from the minimum monthly bill and other charges included in the schedule filed, PROVIDED the municipality will enter into a contract for a reasonable period to pay the sum of \$2,248 annually for its street lamp service, and will pay for all other gas at metered rates.

The Board therefore finds:

- 1. The schedule, as filed, should be dismissed, for the reason that it provides a schedule of rates for metered gas sales which is not just nor reasonable;
2. That the company may file the following schedule to become effective on March 1st, 1918, predicated on safe, adequate and proper service, viz.:

Schedule of Rates for Gas Sold Through Meters.

For gas supplied to metered consumers, \$2.10 per thousand cubic feet; subject to a discount of 10c. per thousand cubic feet if paid within ten days after rendering the bill.

A monthly minimum bill of \$1.50 will be made to all connected customers.

All bills for gas consumed are payable ten days after presentation; subject to the discount provided in the preceding paragraph. If bills are not paid within fifteen days after presentation, gas may be turned off and the meter removed from the premises. Service will not be resumed until \$1.00 is paid for turning on the gas in such instances.

A deposit of \$10 will be required from all except yearly customers, this deposit to be returned when service is discontinued and all bills due the company are paid.

Board of Trade of New Brunswick *vs.* Delaware and Raritan Canal Co.. &c.

A charge will be made for alterations and repairs requested by consumers for which the company is not responsible.

Schedule of Rates for Municipal Street Lamps.

For the 54 lamps now in use, the city is to pay as follows:

For the 12 400 W. lamps, the sum of	
23.7c. a night, or \$86.50 a year each,	
making a total for the 12 lamps per	
annum	\$1,038
For the 42.60 W. lamps, the sum of	
7.9c. a night, or \$28.80 a year each,	
making a total for the 42 lamps per	
annum	1,210

For the 54 lamps, total.... \$2,248

GAS USED FOR OTHER PURPOSES.

Gas used for other purposes by the city to be supplied at the schedule of rates for gas sold through meters.

No. 524.

BOARD OF TRADE OF THE CITY OF NEW BRUNSWICK

v.

THE DELAWARE AND RARITAN CANAL COMPANY AND THE PENNSYLVANIA RAILROAD COMPANY, LESSEE.

A. C. Streitwolf, for the petitioner.

Henry W. Bikle, for the respondents.

In re Public Service Gas Company—Increase in Rates.

The petitioner applied to the Board to suspend, pending an inquiry into the justice and reasonableness thereof, certain proposed increases of rates to be charged by the respondents.

On February 6th, 1912, the Board filed a report in which, amongst other things, it decided that it was without power to control tolls on the Delaware and Raritan Canal, except where they exceed the limits set by charter. The respondents moved to dismiss the present proceeding, on the ground that the Board is without jurisdiction in the circumstances as stated in its prior report.

The question submitted is one of very great importance, and, in the judgment of the Board, warranted a further consideration thereof.

After a careful study of the helpful briefs submitted by counsel, and a review of the pertinent statutes and the cases cited, supplemented by independent investigation, the Board finds that the conclusion heretofore reached by it is in accord with the pronouncements of the courts of New Jersey, which are binding upon the Board.

The motion is, therefore, granted and the petition is dismissed.

Dated February 27th, 1918.

No. 525.

**IN THE MATTER OF HEARING OF THE PETITION OF THE PUBLIC
SERVICE GAS COMPANY FOR INCREASE IN RATES.**

1. Under ordinary conditions it is of prime public importance that the property of public utilities be maintained in condition to render effective service. In the present emergency the need is emphasized by the intimate relationship of continued effective operation of public utilities to continued efficient operation of war industries. The former is indispensable to the latter. Revenues must yield the funds which are to maintain property in condition to render such service.

2. An increased charge is allowed entirely as a war emergency measure without passing upon the reasonableness of the rentals and dividends paid by the company or upon the reasonableness of the company's appropriations for general amortization.

In re Public Service Gas Company—Increase in Rates.

3. Acceptance by the company of the increases allowed will be taken as a stipulation that abrogation or modification of the war surcharge may be made as and if conditions as indicated by operating results warrant.

T. N. McCarter, Frank Bergen, L. D. H. Gilmour and E. W. Wakelee, for Public Service Gas Company.

E. F. Merrey, for Chamber of Commerce of Paterson.

E. G. C. Bleakly, for City of Camden.

Francis Scott, R. B. Lewis and Mayor Amos H. Radcliffe, for City of Paterson.

J. B. Kates, for Collingswood Borough.

Jerome T. Congleton, for City of Newark.

Jerome T. Congleton, C. H. Anderson and G. N. Seger, for New Jersey League of Municipalities.

J. K. English, for Springfield Township.

W. H. Barbour, for Bayonne Chamber of Commerce.

William C. Asper, for Weehawken.

Leo J. Coakley, for South Amboy.

F. W. Yorston, for New Brunswick Board of Trade.

F. Van Z. Lane, for Jersey City Chamber of Commerce.

Warren C. King, for Manufacturers Council of New Jersey, Bound Brook Board of Trade, Manufacturers Association of Bound Brook.

William F. Hoffman, for Board of Trade of Newark.

In re Public Service Gas Company—Increase in Rates.

Although not specifically stated therein, the petition is in effect a prayer for emergency relief on account of the extraordinary increases in the cost of labor and materials entering into the production and distribution of gas by the company arising out of the war. The following observations made by the Board in its report on the co-pending application of the Public Service Electric Company for increase in electric power rates are applicable in this case: "That the company regards this as an emergency petition was made plain in the testimony of Mr. McCarter, president of the petitioner, who stated:

" 'This proceeding we have here to-day is not the usual proceeding of a rate case, based on valuation. It is, as we conceive it to be, an application for relief, because of the extraordinary conditions now existing.'

and he further stated in cross-examination:

Q. (By Mr. Bleakly.) " 'The basis of this application, as I understand it, is due to these extraordinary war conditions? A. Yes, sir.'

"The Board has dealt with this application as one growing out of extraordinary war conditions, resulting in abnormally high costs. We have not dealt with this proceeding as we would, under normal conditions, deal with an application to increase rates. The requirement of proof of all of the factors entering into the fixing of a rate would involve extended hearings and investigation covering so long a period of time as to result, in effect, in a denial of emergency relief.

"However, the Board has, in this proceeding, placed upon the company the burden of completely justifying its application, in view of the emergency.

"It is a matter of common knowledge that wages and the cost of fuel which make up a large part of the production expense of electric light and power" [and gas] "companies have greatly increased, and, in fact, that all labor and supplies which must be used in the process of operating such properties and maintaining them in repair have risen greatly in price since the normal pre-war times—in some instances, in the case of supplies, the rise being more than one hundred per cent.

"These added costs must be met. The question now presented, therefore, is whether they may, with fairness, be met by an increase in rates.

In re Public Service Gas Company—Increase in Rates.

“The determination of this question is affected by several considerations. Under ordinary conditions, it is of prime public importance that the property of public utilities be maintained in condition to render effective service. In the present emergency this need is emphasized by the intimate relationship of continued effective operation of public utilities to continued efficient operation of war industries. The former is indispensable to the latter. Revenues must yield the funds which are to maintain utility property in condition to render such service.

“In making the allowances hereinafter stated, certain sums have been included to cover current maintenance and appropriations for replacements and to amortization or depreciation reserve to meet obsolescence and accruing depreciation. It is imperative that these allowances be held by the company to meet such requirements.

“We have not dealt with the value of the property in this proceeding. In the existing emergency the determining consideration must be to keep the property in uninterrupted and effective operation. This involves the payment of fixed rentals and charges without regard to the value of the property, since failure to satisfy such contracted rents and charges would jeopardize uninterrupted operation.

“If the revenues are not increased to meet these added costs, the moneys available for dividends will be substantially diminished. In the present financial situation the public has a vital interest in maintaining the fund available for dividends on the stock of the company. Without assurance of sufficient earnings at the present time, the company will be unable to attract new capital to finance the extensions that are required to meet war needs. A material decrease in dividends would not only result in preventing the free flow of new capital, but would materially depreciate the market value of outstanding securities.

“This possible shrinkage in the value and marketability of such securities would tend to undermine confidence and render unstable security markets. Such a condition would have direct influence upon the securing of money by the National Government for war purposes.

“The required funds for these purposes must be yielded by operating revenues. In the broad view, the public interest requires it.

In re Public Service Gas Company.—Increase in Rates.

“Testimony in this case, given by the Commissioner of Banking of the State of New Jersey, emphasizes the importance in public policy of sustaining in this time of emergency the credit of the public utility enterprises of the State, on account of the aggregate of their securities which are now held by the banks and trust companies of the State.

“The needs of the situation are summed up in the recent annual report of the Comptroller of the Currency of the United States, quoted in the record of this case, as follows:

“‘The work of war has thrown upon many of these (public utility) corporations strains which they are unable to endure without prompt help. The costs of their labor and of all material for operation, betterment and upkeep have increased heavily and suddenly. They are required to increase radically and quickly their service and facilities. Industries manufacturing war munitions and materials demand of the public utilities corporations constantly greater supplies of power and light.
* * *

“‘* * * It is essential that forbearance and consideration are exercised by the State Commission and municipal authorities, and that the corporations also be permitted to make such additions to their charges for service as will keep in them the breath of solvency, protect their owners against unjust loss, and give them a basis of credit on which they may obtain the funds with which to meet the strain put on them by the Government’s needs.’

“The matter has been further considered by the Secretary of the Treasury in a letter to the President of the United States, in part as follows:

“‘Our local public utilities must not be permitted to become weakened. The transportation of workers to and from our vital industries, and the health and comfort of our citizens in their homes are dependent upon them, and the necessary power to drive many of our war industries and many other industries essential to the war is produced by them.

In re Public Service Gas Company—Increase in Rates.

“It may be that here and there, because of the prominence given to less important interests immediately at hand, State and local authorities do not always appreciate the close connection between the soundness and efficiency of these local utilities and the national strength and vigor, and do not resort with sufficient promptness to the call for remedial measures.”

The representatives of various municipalities which appeared at the hearing sustained the same point in the public interest. Mr. Congleton said:

“They say they should have more revenue. I agree with them in that; I think they ought. I think they are entitled to more revenue. When this Board fixed ninety cents, determined that ninety cent rate, that they should give it to the public for that, and still allow the company to have a fair return on the capital invested, then I say that we must take notice that conditions have changed and the price of labor and materials have very much increased, and they would be entitled to an increase in their charge, either this kind, or what I say, in the rate.”

Mr. Coakley said:

“I don’t think we protest against this company receiving an increase in revenue, but we do object to the manner in which they ask for it. We are content to have them receive an increase in rates, if the Board decides that is proper, but we don’t want that service charge.”

Mr. Bleakly said:

“The city of Camden is already on the record as protesting, and agreeing some increase, of course, should be allowed to this company, under the showing they have made, but, as my friend here stated, that the burden be on the company, say, six months, or whatever the Commission determines, after the war, to show it should be continued, and not on the municipalities and on the public to show that should be upset.”

In the following table are shown the financial results of the operation of petitioner’s property in 1916 and 1917, and the petitioner’s estimate of the results to be expected in 1918 from operation under the old rates.

In re Public Service Gas Company—Increase in Rates.

TABLE SHOWING THE FINANCIAL RESULTS OF OPERATION OBTAINED IN 1916 AND 1917, AND THE PETITIONER'S ESTIMATE OF THE RESULTS TO BE EXPECTED FROM THE 1918 OPERATIONS UNDER THE OLD RATES.

	Results of 1916.	Results of 1917.	Company's estimate for 1918.
Operating revenues—			
From sales of gas.....	\$11,016,739 58	\$11,977,460 22	\$12,696,107 83
From sales of residuals	280,598 05	425,801 88	380,000 00
From gas merchandise and jobbing.....	261,075 64	325,798 77	75,000 00
Operating expenses, taxes and uncollectible bills.....	\$11,758,413 17	\$12,729,060 87	\$13,151,107 83
Net operating income before deducting general amortization.....	6,558,823 12	8,067,610 35	8,649,268 84
Non-operating income	\$4,989,590 05	\$4,671,450 52	\$4,501,838 99
	363,212 66	225,195 82	225,195 82
Gross corporate income before deducting general amortization.....	\$5,362,802 71	\$4,896,646 34	\$4,727,034 81
Income deductions (mostly rentals of property of underlying com- panies)	4,006,780 51	4,228,111 58	4,228,111 58
Miscellaneous appropriations	\$1,343,022 20	\$668,534 76	\$498,923 23
	23,328 72	23,328 60	20,407 01
Miscellaneous refunds and dividends.....	\$1,319,693 48	\$645,206 16	\$478,516 22
	76,923 46	2,921 59	.....
Balance available for amortization, dividends and surplus.....	\$1,396,616 94	\$648,127 75	\$478,516 22
Dividends	1,008,000 00	816,000 00	1,208,000 00
Company's appropriation to general amortization.....	\$388,616 94	D \$167,872 25	D \$729,483 78
	247,997 05	68,054 32	608,517 57
Surplus for year.....	\$140,619 89	.....	.....
Deficit for year.....	.....	\$236,926 57	\$1,338,001 35
Cubic feet of gas sold or estimated.....	\$12,399,852 M	13,610,865 M	14,536,430 M

D means Deficit.

In re Public Service Gas Company—Increase in Rates.

The company's estimate for the results of its operations for 1916, after paying the rentals necessary on account of the underlying properties, paying 8 per cent. on the outstanding capital stock and on \$1,500,000 now in hand, to be used for construction and working capital, and providing general amortization (10 cents per thousand cubic feet of gas sold, less current maintenance expenses), shows a deficit of \$1,338,000. In this estimate the appropriation for general amortization is a little more than double the amount that it would be under the rule which was applied by the company in the four years prior to 1917, while the appropriation for 1917 amounted to only a quarter of such appropriation. When applying for general amortization, in the 1917 results of operation, and the 1918 company's estimated results, appropriations according to the rule applied in the four years prior to 1917, the deficit for 1917 as shown in the table is increased to \$443,200, and the estimated deficit for 1918 as shown in the table is decreased to \$1,020,200.

In its petition the company asks for an increase in revenue of approximately \$1,485,000, to be provided by levying a service charge of 25 cents per month upon each of its customers in addition to the regular charge for gas consumed. It has also filed with the Commission for its approval a new schedule of consumption rates in all respects the same as the old rates, only omitting the blocks in which less than 70 cents per thousand cubic feet of gas is charged. In an amended petition the company prays that a service charge as above be approved or that the Board find and fix one dollar per 1,000 cubic feet as a just and reasonable rate for gas supplied by the petitioner or such other relief as to the Board should appear to be just and reasonable.

The schedule of rates in force during 1917 was as follows:

For the first	20,000 cu. ft. of gas per month	90c. per thousand
For the next	30,000 cu. ft. of gas per month	85c. per thousand
For the next	50,000 cu. ft. of gas per month	80c. per thousand
For the next	50,000 cu. ft. of gas per month	75c. per thousand
For the next	50,000 cu. ft. of gas per month	70c. per thousand
For the next	100,000 cu. ft. of gas per month	65c. per thousand
For the next	500,000 cu. ft. of gas per month	60c. per thousand
For the next	500,000 cu. ft. of gas per month	55c. per thousand
For the next	500,000 cu. ft. of gas per month	50c. per thousand
For all over	1,800,000 cu. ft. of gas per month	45c. per thousand

In re Public Service Gas Company—Increase in Rates.

The last two blocks in this schedule have been withdrawn, taking effect for all new customers after October 2d, 1917; for all customers having term contracts extending beyond January 1st, 1918, at the termination of the contracts, and for all other customers with the January, 1918, sales.

The Board has considered all of the points presented and is convinced that the general public interest would be injured if the increasing expenditures of the petitioner at the present time caused a default on its rentals or if its revenues fell off to a point which injured its credit.

The Board is of the opinion that a change in the character of the rates charged by the petitioner should not be made in an emergency adjustment such as that under consideration, and it therefore does not now approve the introduction of a service charge.

We, therefore, allow the petitioner to make a war surcharge of 7 cents per 1,000 cubic feet of gas consumed to be added alike to all customers' bills, and in connection therewith require the withdrawal of all rates under the present schedule which are less than 65 cents per 1,000 cubic feet; the foregoing to go into effect with the February bills. The company is to render reports to the Board of the Operating Revenues, Operating Deductions excluding General Amortization, Non-Operating Income, Income Deduction and balance available for Amortization, Dividends and Surplus for each succeeding calendar month with comparison with the figures for the corresponding month of 1917, and the Board will retain jurisdiction of the emergency or war surcharges as here approved, for the purpose of modifying or abrogating them as and if the conditions change.

The Board does this entirely as a war emergency measure and does not at this time pass upon the reasonableness of the rentals and dividends paid by the company or upon the reasonableness of the company's appropriations for general mortization. Such and like matters must be left for consideration under more normal conditions.

Acceptance by the company of the increases herein allowed will be taken as a stipulation that abrogation or modification of the war surcharge may be made as and if conditions as indicated by operating results warrant.

Dated February 27th, 1918.

In re Public Service Electric Company—Increase in Rates.

No. 526.

IN THE MATTER OF HEARING OF THE PETITION OF THE PUBLIC
SERVICE ELECTRIC COMPANY FOR INCREASE IN ELECTRIC
POWER RATES.

1. The general public interest would be seriously injured if the increasing expenditures of the petitioners at the present time caused a default on its rentals, or if its revenue fell off to a point which injured its credit.

2. It is reasonable that an increase in rates should affect only the power customers, since the elements of increased cost enter into this service to a larger proportion than into the lighting service; and that it should be in the form of an addition or war surcharge to bills as determined under present rate schedules.

3. Acceptance by the company of increases allowed will be taken as a stipulation that abrogation or modification of the same may be made as and if conditions as indicated by operating results warrant.

T. N. McCarter, Frank Bergen, L. D. H. Gilmour and E. W. Wakelee, for Public Service Electric Company.

E. F. Merrey, for Chamber of Commerce of Paterson.

E. G. C. Bleakly, for City of Camden.

Francis Scott, R. B. Lewis and Mayor Amos H. Radcliffe, for City of Paterson.

J. B. Kates, for Collingswood Borough.

Jerome T. Congleton, for City of Newark.

Jerome T. Congleton, C. H. Anderson and G. N. Seger, for New Jersey League of Municipalities.

J. K. English, for Springfield Township.

W. H. Barbour, for Bayonne Chamber of Commerce.

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William C. Asper, for Weehawken.

Leo J. Coakley, for South Amboy.

F. W. Yorston, for New Brunswick Board of Trade.

F. Van Z. Lane, for Jersey City Chamber of Commerce.

Warren C. King, for Manufacturers Council of New Jersey, Bound Brook Board of Trade, Manufacturers Association of Bound Brook.

William F. Hoffman, for Board of Trade of Newark.

Although not specifically stated therein, the petition is in effect a prayer for emergency relief on account of the extraordinary increases in the cost of labor and materials entering into the production and distribution of the company's power arising out of the war. That the company regards this as an emergency petition was made plain in the testimony of Mr. McCarter, president of the petitioner, who stated:

"This proceeding we have here to-day is not the usual proceeding of a rate case, based on valuation. It is, as we conceive it to be, an application for relief, because of the extraordinary conditions now existing."

and he further stated in cross-examination:

Q. (By Mr. Bleakly.) "The basis of this application, as I understand it, is due to these extraordinary war conditions? A. Yes, sir."

The Board has dealt with this application as one growing out of extraordinary war conditions, resulting in abnormally high costs. We have not dealt with this proceeding as we would, under normal conditions, deal with an application to increase rates. The requirement of proof of all of the factors entering into the fixing of a rate would involve extended hearings and investigation covering so long a period of time as to result, in effect, in a denial of emergency relief.

However, the Board has, in this proceeding, placed upon the company the burden of completely justifying its application, in view of the emergency.

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It is a matter of common knowledge that wages and the cost of fuel which make up a large part of the production expense of electric light and power companies have greatly increased, and, in fact, that all labor and supplies which must be used in the process of operating such properties and maintaining them in repair have risen greatly in price since the normal pre-war times—in some instances, in the case of supplies, the rise being more than one hundred per cent.

These added costs must be met. The question now presented, therefore, is whether they may, with fairness, be met by an increase in rates.

The determination of this question is affected by several considerations. Under ordinary conditions, it is of prime public importance that the property of public utilities be maintained in condition to render effective service. In the present emergency this need is emphasized by the intimate relationship of continued effective operation of public utilities to continued efficient operation of war industries. The former is indispensable to the latter. Revenues must yield the funds which are to maintain utility property in condition to render such service.

In making the allowances hereinafter stated, certain sums have been included to cover current maintenance and appropriations for replacements and to amortization or depreciation reserve to meet obsolescence and accruing depreciation. It is imperative that these allowances be held by the company to meet such requirements.

We have not dealt with the value of the property in this proceeding. In the existing emergency the determining consideration must be to keep the property in uninterrupted and effective operation. This involves the payment of fixed rentals and charges without regard to the value of the property, since failure to satisfy such contracted rents and charges would jeopardize uninterrupted operation.

If the revenues are not increased to meet these added costs, the moneys available for dividends will be substantially diminished. In the present financial situation the public has a vital interest in maintaining the fund available for dividends on the stock of the company. Without assurance of sufficient earnings at the present

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time, the company will be unable to attract new capital to finance the extensions that are required to meet war needs. A material decrease in dividends would not only result in preventing the free flow of new capital, but would materially depreciate the market value of outstanding securities.

This possible shrinkage in the value and marketability of such securities would tend to undermine confidence and render unstable security markets. Such a condition would have direct influence upon the securing of money by the National Government for war purposes.

The required funds for these purposes must be yielded by operating revenues. In the broad view, the public interest requires it.

Testimony in this case, given by the Commissioner of Banking of the State of New Jersey, emphasizes the importance in public policy of sustaining in this time of emergency the credit of the public utility enterprises of the State, on account of the aggregate of their securities which are now held by the banks and trust companies of the State.

The needs of the situation are summed up in the recent annual report of the Comptroller of the Currency of the United States, quoted in the record of this case, as follows:

"The work of war has thrown upon many of these (public utility) corporations strains which they are unable to endure without prompt help. The costs of their labor and of all material for operation, betterment and upkeep have increased heavily and suddenly. They are required to increase radically and quickly their service and facilities. Industries manufacturing war munitions and materials demand of the public utilities corporations constantly greater supplies of power and light.
* * *"

"* * * It is essential that forbearance and consideration are exercised by the State Commission and municipal authorities, and that the corporations also be permitted to make such additions to their charges for service as will keep in them the breath of solvency, protect their owners against unjust loss, and give them a

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basis of credit on which they may obtain the funds with which to meet the strain put on them by the Government's needs."

The matter has been further considered by the Secretary of the Treasury in a letter to the President of the United States, in part as follows:

"Our local public utilities must not be permitted to become weakened. The transportation of workers to and from our vital industries, and the health and comfort of our citizens in their homes are dependent upon them, and the necessary power to drive many of our war industries and many other industries essential to the war is produced by them.

"It may be that here and there, because of the prominence given to less important interests immediately at hand, State and local authorities do not always appreciate the close connection between the soundness and efficiency of these local utilities and the national strength and vigor, and do not resort with sufficient promptness to the call for remedial measures."

In the following table are shown the financial results of the operation of petitioner's property in 1916 and 1917, and the petitioner's estimate of the results to be expected in 1918 from operation under the old rates:

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TABLE SHOWING THE FINANCIAL RESULTS OF OPERATION OBTAINED IN 1916 AND 1917, AND THE PETITIONER'S ESTIMATE OF THE RESULTS TO BE EXPECTED FROM THE 1918 OPERATIONS UNDER THE OLD RATES.

	Results of 1916.	Results of 1917.	Company's estimate for 1918.
Operating revenue	\$12,814,597 36	\$15,168,255 44	\$13,939,113 00
Operating expenses, taxes and bad debts (i. e., revenue deductions excluding amortization)	5,703,316 83	8,552,165 08	8,682,817 00
Operating income (amortization not deducted)	\$7,111,280 53	\$6,616,090 36	\$5,256,296 00
Non-operating income	83,467 30	71,858 62	71,859 00
Gross income (amortization not deducted)	\$7,194,747 92	\$6,687,948 98	\$5,328,155 00
Income deductions (mostly rentals of property of underlying com- panies)	2,760,584 03	2,780,364 17	2,787,850 00
Net income (amortization not deducted)	\$4,434,163 89	\$3,907,584 81	\$2,540,305 00
Miscellaneous appropriations	17,001 36	20,793 19	17,001 00
Miscellaneous refunds	\$4,417,162 53	\$3,886,791 62	\$2,523,304 00
Amount available for amortization, dividends and surplus	\$4,448,707 09	73,499 15	.....
General amortization	1,776,140 71	\$3,900,290 77	\$2,523,304 00
Dividends	\$2,672,566 98	813,849 81	1,646,955 00
Surplus	2,380,000 00	\$3,146,440 96	\$876,349 00
Deficit	\$292,566 98	2,620,000 00	2,280,000 00
Additional amortization estimated by company's ordinary rule .....	.....	\$526,440 96	.....
Surplus .....	.....	.....	.....
Deficit .....	.....	\$1,189,921 00	\$1,403,651 00
Additional amortization estimated by company's ordinary rule
Surplus	\$292,566 98
Deficit	\$663,480 04	\$1,403,651 00

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In its petition the company asks for an increase of annual revenue of \$1,800,000, to be provided by increasing the power rates which are a part of the rate schedules now in effect, but its estimate of the financial results to be expected for 1918 under the old rates as set forth in the accompanying table shows a deficit of \$400,000 less than the aforesaid amount, or \$1,400,000 for the year, after paying the rentals necessary on account of the underlying properties, paying 8 per cent. on the outstanding capital stock of the company including \$3,000,000 of capital stock to be issued for cash at par during 1918, to be used in additions to plant, and providing for General Amortization estimated according to the company's ordinary rule.

The company proposes to obtain this increase of \$1,800,000 in annual revenue by changing the schedules of rates charged power customers as shown in the following statement. At the same time it proposes to abrogate the existing coal clause and substitute therefor a coal clause on a different base.

		Present rate.	Company's proposed rate.
<i>Uniform Retail Power Rate.</i>			
1st Step.	10 cents to be paid per kilowatt-hour of consumption each month up to and including an amount of kilowatt-hours per horse power of maximum demand of.....	20 kw.-hrs.	30 kw.-hrs.
2d Step.	To be paid per kilowatt-hour for the next 50 kilowatt-hours consumed in such month in excess of the first step of the rates.....	6c.	8c.
3d Step.	To be paid per kilowatt-hour for the next 500 kilowatt-hours consumed in such month in excess of the first and second steps of the rates,	4c.	5.5c.
4th Step.	To be paid per kilowatt-hour for the consumption in such month in excess of the consumption mentioned in the first, second and third steps of the rates.....	2c.	2.7c.
	The customer to agree to a minimum bill each month equal to an amount per horse power of the full rated capacity of the connected load amounting to	50c.	70c.

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Uniform Wholesale Power Rate.

A primary charge to be paid each month as follows:	Present rate.	Company's proposed rate.
For each horse power of customer's maximum demand in such month up to and including 200 horse power.....	\$1 50	\$2 00
For each horse power of the customer's maximum demand in such month over 200 horse power and up to and including 400 horse power	1 35	1 80
For each horse power for the excess of the customer's maximum demand in such month over 400 horse power.....	1 20	1 60
A charge for electric power consumed to be paid each month as follows:		
For each kilowatt-hour of consumption in such month up to and including 3,000 kilowatt-hours	3c.	4c.
For each kilowatt-hour of consumption in such month over 3,000 kilowatt-hours up to and including 10,000 kilowatt-hours.....	2c.	2.7c.
For each kilowatt-hour for excess consumption in such month over 10,000 kilowatt-hours..	1c.	1.35c.
The customer to guarantee a minimum monthly bill of	\$300 00	\$400 00

Kilowatt-year Rate.

Customer to pay per year per kilowatt of maximum demand	\$65 00	\$87 75
Annual guarantee to amount to the capacity or demand specified by the customer multiplied by	65 00	87 75
The minimum guarantee for any customer.....	\$65,000 00	\$87,750 00

Modifications are also proposed by the company in its Break Down Service power rates, and the company proposes to abolish the Elevator rates and Refrigerator rates which are now in effect.

These proposed changes in the schedules would increase the average revenue derived therefrom approximately 35 per cent.

Supplementing the rate schedule of the wholesale customers there is now in effect a coal clause which provides for an addition of thirty-nine thousandths (.039) of a cent per kilowatt-hour of current consumed for each thirty-five cents (35c.) increase from an average cost of \$4.00 per gross ton for bituminous coal delivered alongside or at siding of generating stations during each month; and for a deduction of thirty-nine thousandths (.039) of

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a cent per kilowatt-hour each thirty-five cents (35c.) of decrease from an average cost of coal of \$3.50 per gross ton.

The company proposes a new coal clause to supersede the present one, and to apply to the wholesale, kilowatt-year and retail customers, which provides an addition of twenty-eight thousandths (.028) of a cent per kilowatt-hour of current consumed for each twenty-five cents (25c.) of increase from an average cost of \$5.00 per gross ton of bituminous coal delivered alongside or at siding of generating stations during each month; and for a deduction of twenty-eight thousandths (.028) of a cent per kilowatt-hour for each twenty-five cents (25c.) of decrease from an average cost of coal of \$4.50 per gross ton.

The proposed coal clause thus raises the price of coal at which the first addition to the charge for current will be made from \$4.35 per gross ton to \$5.25, and raises the price at which the first deduction from the charge for current will be made from \$3.15 per gross to \$4.25. It also changes the step on which the addition or reduction in charge will be made from 35 cents to 25 cents.

The Board has considered all of the points presented and is convinced that the general public interest would be seriously injured if the increasing expenditures of the petitioner at the present time caused a default on its rentals or if its revenue fell off to a point which injured its credit. Such a result could have only one consequence, which would be poor service to the customers, failure to make the enlargements of plant which the Government emergency requires, and probably financial confusion. We will, therefore, permit the petitioner to make a modification of certain of its charges, in the form of a surcharge on the customers' bills as hereinafter set forth; but we do not approve of the change of rate schedules as proposed by the petitioner. The surcharge is approved during the continuance of the National emergency or until modified or abrogated by order of the Board.

It is obvious, from the company's estimates, that the Board should not approve an increase in revenue of more than \$1,400,000 over what would be obtained from the present rates. All things considered, we are of the opinion that an increase of \$1,000,000 will enable the company in 1918 to pay its rentals, to pay divi-

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dends at 8 per cent. on its capital stock and to appropriate to general amortization a sufficient sum under present conditions, even if the conditions throughout the year prove to be as unfavorable as the estimates of the company indicate. The Board will, therefore, approve as a war emergency measure the application of a surcharge so as to increase the revenue of the company during 1918 by approximately \$1,000,000 over what would be produced by the present rates without taking into account the present coal clause. The Board does this entirely as a war emergency measure and does not at this time pass upon the reasonableness of the rentals and dividends paid by the company or upon the reasonableness of the company's rule for determining the appropriation for general amortization. Such and like matters must be left for consideration under more normal conditions.

It is reasonable that this increase in rates should affect only the power customers, since the elements of increased cost enter into this service to a larger proportion than into the lighting service; and that it shall be in the form of an addition or war surcharge to the bills as determined under the present rate schedules. We find that a suitable way to provide the increase will be by adding to each bill of the wholesale power and kilowatt-year customers a war addition of twenty-five per cent. (25%), and to each bill of the retail power customers a war addition of twenty-five per cent. (25%) on the part of the bill arising on account of all current except that paid for at the 10 cent step; the bills for break down service, those under the Refrigerator rate and those under the Elevator rate to also include war additions as above.

As heretofore pointed out the new coal clause proposed by the company provides for an addition to the charge per kilowatt-hour of current consumed by wholesale, kilowatt-year and retail customers when the cost of bituminous coal reaches \$5.25 alongside or on siding of generating stations, and for a deduction when the cost of coal reaches \$4.25 per gross ton. The estimates of increased operating expenses of the company are based on such cost of coal of approximately \$5.25, consequently the cost of coal at which the added charge shall be made should be higher and the price of coal at which a deduction in charge shall be made should also be higher. The Board will approve a coal clause supplementary to the appli-

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cation of the above war additions like that proposed by the company, but in which the price of coal at which the first addition to the charge for current consumed will be made is not less than \$5.50 per gross ton and at which the first deduction in the charges will be made is not less than \$5.00 per gross ton; the coal clause to apply to the current consumed by the wholesale and kilowatt-year customers and to the current consumed by the retail customers except that paid for at the 10 cent rate.

The petition of the company is therefore dismissed, and the proposed rates are suspended with leave to the company to file tariffs amended by providing for a war surcharge and coal clause as above set forth, to go into effect with the February sales. The Board hereby requires reports to be rendered to it by the company of the Operating Revenue, Operating Deductions excluding General Amortizations, Non-Operating Income, Income Deductions, and balance available for Amortization, Dividends and Surplus for each succeeding month with comparison with the figures for the corresponding month of 1917, and the Board will retain jurisdiction of the emergency or war surcharges thus approved, for the purpose of modifying or abrogating them as and if the conditions change.

The Board has received protest against an allowance of the full amount of the emergency increase prayed for by the petitioner and has been requested not to allow any increase to take effect until the April sales. With respect to the first objection, the conclusion of the Board as herein shown is that this objection has merit. With respect to the second objection, the Board is of the opinion that the measure of relief to be afforded should be applied to February sales, as the emergency is immediate.

Acceptance by the company of the increases herein allowed will be taken as a stipulation that abrogation or modification of the war surcharge, including coal clause allowances, may be made as and if conditions as indicated by operating results warrant.

Dated February 27th, 1918.

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Pages 81 to 92, inclusive, of this volume contain reports upon applications of the Burlington Sewerage Company and the Collingswood Sewerage Company for approval of new schedule of rates. Pages 463 to 470, inclusive, contain the Board's report upon the application of the New Jersey Gas and Electric Company for approval of new schedule of rates. Appeals were taken to the Supreme Court from the Board's orders in these cases. Decisions of the court which were as follows were not filed until that part of this volume which contains the reports was printed.

NEW JERSEY SUPREME COURT.

COLLINGSWOOD SEWERAGE COMPANY

v.

BOROUGH OF COLLINGSWOOD.

Argued November 8th, 1917. Decided February 7th, 1918.

1. Upon a petition by a public utility company to the Board of Public Utility Commissioners for permission to increase rates, the petitioner is entitled to a formal determination of the claim advanced by it that existing rates are unjust and unreasonable, and this right is not met by an adjudication that the rates are not so low as to be confiscatory.

2. By a consent given by a municipality to a sewerage company under the act of 1898 (*Pamph. L.*, p. 484; *Comp. Stat.*, p. 3584), maximum and minimum rates were fixed; subsequently the sewerage company petitioned the Board of Public Utility Commissioners for permission to increase rates. *Held*, that the Board had power to increase rates.

3. An ordinance granting consent of a municipality to the incorporation of a sewerage company under the act of 1898 and fixing maximum and minimum rates is a grant upon condition rather than a contract; the legislature may clothe a public commission with power to fix higher rates upon petition by the sewerage company.

4. Rates charged by a public service company may be unjust and unreasonable because too low as well as because too high.

5. The Board of Public Utility Commissioners upon a petition by a sewerage company refused permission to raise rates, but found that the existing rates were not enough to enable the company to raise money to make necessary extensions and suggested municipal action which would make it possible for the company to obtain new capital. *Held*, that the Board should have ordered the necessary modification of rates and not have shifted the responsibility to the municipality.

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Certiorari to the Board of Public Utility Commissioners.

Before Justices Swayze, Trenchard and Minturn.

Gilbert Collins and J. Fithian Tatem, for the prosecutor.

The Attorney-General and Francis D. Weaver, for Collingswood.

L. Edward Herrmann and Frank H. Sommer, for Board of Public Utility Commissioners.

The opinion of the court was delivered by

Swayze, J.

The prosecutor was incorporated in 1900, pursuant to the act of 1898 (P. L., p. 484; Comp. Stat., p. 3584).

In accordance with Section 12 there was annexed to the ordinance granting the consent of the Borough required by the act the maximum prices or rents that might be charged property owners for the use of the sewerage system. There was also stated a minimum price which, though not required, was justified by the statutory authority to state other terms and conditions. Except for the maximum and minimum, no price was fixed. In 1914, the Sewerage Company petitioned the Board of Public Utility Commissioners for its authority to charge higher rates. The Board found that the present value of the plant, after a proper allowance for depreciation, was about \$139,000; the gross income, \$12,433.36; operating expenses, taxes and insurance, \$7,226.52; and the net balance, \$5,200, which it found furnished a revenue of more than three per cent. upon the company's property investment. Whether these figures make any allowance for depreciation does not appear. There is no finding as to whether the present rates are just and reasonable, sufficient or insufficient. The Board contented itself with finding that it did not appear that the rates were so low as to be confiscatory. It found and stated in the beginning of its "report" that "it did not appear that the refusal to allow the increase of rates requested will result in the rendition of unsafe, inadequate

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or improper service to those *to whom the company is under obligation to serve with its present facilities.*" The importance of the limitation on the finding, indicated by the italicized words, is shown by a subsequent part of the report, where it is set forth that numerous applications were made to the Board for orders requiring the Sewerage Company to make extensions of its service. As to these, the report finds that there is no doubt of the desirability of these extensions, but the Board is unable to find that it is reasonable and practicable for the company in its present financial condition to make them. It, therefore, declines to order the extension, but suggests that the matter be given "serious consideration" by the Borough; "it may be that relief can be had only by municipal action which will make it possible for the utility to obtain new capital."

That *certiorari* is a proper method to review such failure of the Board to act as the act of 1911 contemplates, is now settled. The Sewerage Company was entitled to a formal determination of the claim advanced by it that existing rates are unjust and unreasonable. (*City of Passaic v. Board of Public Utility Commissioners*, 87 N. J. Law 705.) If the Utility Board had jurisdiction at all under the Public Utility Act, this right was not met by an adjudication that the rates were not so low as to be confiscatory. The question of confiscation is important when the claim is made under the fourteenth amendment that property has been taken without due process of law. The question under the Public Utility Act is stated by the act itself. Section 16c (P. L. 1911, p. 377). The Board is thereby required to fix "just and reasonable individual rates." The question is not whether existing rates are confiscatory but whether they are just and reasonable.

The first doubt to be resolved is whether the Board had jurisdiction to settle this question. Its jurisdiction is challenged because it is said that to alter the rates would impair the obligation of the contract between the Borough and the company. We think this question is settled, so far as this court is concerned, in favor of the jurisdiction of the Board by what was said in at least three prior decisions:

Public Service Railway Co. v. Public Utility Board, 85 N. J. Law 123.

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North Wildwood v. Public Utility Commissioners, 88 N. J. Law 81.

Atlantic Coast E. R. Co. v. Public Utility Board, 89 N. J. Law 407.

We might rest on these cases, but in view of the importance of the question, striking as it does at the root of a statute founding for good or ill a new public policy, we venture to add some additional considerations. In one sense, an ordinance embodying a municipal consent upon certain terms to the creation of a franchise, whether the general franchise to be a corporation or the special franchise to use the public streets, may be called a contract, accurately enough for practical purposes since it constitutes an enforceable agreement. It is, however, ordinarily an agreement of a peculiar kind. The municipality as such, although a party, indeed often as in this case the only party on one side, has little or no direct beneficial interest. It contracts, or rather imposes conditions, for the benefit of individuals, as in this case the Borough, for the benefit of its citizens who might thereafter contract for connections with the sewerage system, provided for a maximum. But no citizen was bound to connect with the company's sewers, nor was there any express language requiring the company to supply the connection. There could not be any such requirement until the price was determined; the ordinance and consent did not fix a price, but only the maximum and minimum between which the price must fall. So far as the ordinance or consent goes, there might be within those limits a different price for each connection depending on its distance from a central point or a discharge point, on the size of the building, the number of toilets or water taps, or perhaps other consideration. In case of disagreement between landowner and sewerage company, the price would have to be fixed by some tribunal. It would not naturally be the other party to the agreement; it would properly be some outside tribunal, which might at least be supposed to be impartial. This might be a court, a commission, or since 1911 the Public Utility Commission. We know of no other way in which the individual rate could be fixed and a contract made for sewerage service. The Legislature has in terms given that power to the Public Utility Commission, and while the Borough had power to impose

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fixed individual rates, and a detailed schedule as a condition precedent to its consent, it chose not to exercise that power but to impose more elastic and less certain conditions.

Even if the ordinance had fixed the rate for each connection, there would have been no effective way for enforcing it as a contract by action, since the other contracting party is not injured and could only recover nominal damages. *Summit v. Morris Traction Co.*, 85 N. J. Law 193.

Regarding the ordinance solely as a contract, the individual citizens of Collingswood would have no right of action thereon because they are not parties to the agreement. *Hall v. Passaic Water Co.*, 83 N. J. Law 771 (at p. 776); *Baum v. Somerville Water Co.*, 84 N. J. Law 611. The truth is an ordinance of this kind is a grant upon condition rather than a contract. It creates public duties which can be enforced by *mandamus*. *Rutherford v. Hudson River Traction Co.*, 73 N. J. Law 227, 243. Whether upon a *mandamus* to compel a connection with a house sewer or drain, the court could fix the price somewhere between the maximum and minimum, is a question not now before us. The question now raised is whether the State through its legislative arm could provide a tribunal which might fix rates in the face of such an ordinance. Since some tribunal must fix rates where the public utility corporation and the individual citizen cannot agree, and the rate is not fixed by ordinance as it is not in the present case, we see no reason why the Legislature may not clothe a public commission with that power, reserving, as the Legislature has reserved in this case, the right of the Supreme Court to review by *certiorari*.

These considerations seem conclusive in favor of the general jurisdiction of the Public Utility Commission, provided the language of the statute is apt for the purpose. It is obvious from a mere reading of the act that the Legislature meant to invest the Commission with full power, and that intent and the use of language apt for the purpose is not questioned. The point made is that it is beyond the power of the Legislature to impair the obligation of the contract between the municipality and sewerage company by fixing a rate higher than the maximum fixed by the ordinance. This contention requires careful consideration. We have shown that the ordinance and consent of 1900 did not create a

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contract for actual service by the sewerage company to any customer, and that as to the municipality its effect was rather to create a public duty to be enforced by *mandamus*, than a contractual relation to be enforced by action. Fixing limits between which the actual price of the service might be established by agreement or otherwise, is rather in the nature of a legislative act to prevent extortion, than of a contract. The ordinance was the legislative act of the municipality. As a legislative act, it was subject to the control of the Legislature itself, and that body could make changes as long as it did not infringe the rights of the sewerage company arising under the ordinance. It makes little difference whether we say that the ordinance created by way of legislative grant a property right called a franchise, protected by the fourteenth amendment, or a contract protected by the contract clause of the Federal Constitution and our own State Constitution. In either case, the question is whether a municipal corporation, an agency of the State, is protected by either the fourteenth amendment or the contract clause. It is well settled that such protection does not extend to the rights of the municipal corporation against its own creator. *Rader v. Southeasterly Road District, &c.*, 36 N. J. Law 273. The rule was there stated by Justice Depue:

“The power of the Legislature over corporations created for purposes of local government is supreme. From a grant of this character, no contract arises with the corporators which exempts it from legislative control. The Legislature may alter, modify or repeal the charter at any time in its discretion. The only limitation on the operation of such repeal is as to creditors, that it shall not operate to impair the obligation of existing contracts, or deprive them of any remedy for enforcing such contracts which existed when they were made.”

This statement of the law has been frequently followed, has never been questioned in our State, and is supported by abundant authority in the United States Supreme Court. It is enough to cite *Worcester v. Street Railway Co.*, 196 U. S. 539.

The rule has been recently applied in Massachusetts to the case of increase of street railway fares. *Board of Survey v. Bay State Railway Co.*, 113 N. E. Rep. 273. It applies with all the more force to changes of the terms of municipal ordinances granting

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rights to public utility companies, so far as concerns the rights of the municipalities themselves, because of the fact that in fixing the terms, the municipal authorities do not act for the local interests of the municipality, but "as public officers exercising a quasi-judicial authority." *Hewett v. Inhabitants of Canton*, 65 N. E. Rep. 42 (Mass.). As to contracts for service that may have been made with individuals, we are not informed. There were such contracts, it appears, but we are not advised of their terms. They may all be terminable at the will of the sewerage company, and it is probable that they were merely contracts for service without any definite term being fixed. Whether for no definite term, for a definite term, or nominally in perpetuity, all were made subject to the power of the State to regulate rates. This is a governmental function and cannot be contracted away, even by a municipality, unless specifically authorized by the Legislature; and the authority must be clear. *Home Telephone Co. v. Los Angeles*, 211 U. S. 265. Much less can this governmental power be hampered without clear legislative authority, by a contract between a private corporation and private citizens. We do not know that it has even been suggested that such a contract was not subject to legislative control. To hold that such a contract could tie the hands of the Legislature would be to establish diversity in rates. Consumers, by favor, or by skill in bargaining might obtain advantageous rates, and would thwart the establishment of uniform rates to which so much of our legislation has been directed. The government has never granted this governmental power to private citizens, and in the absence of such a grant, no contract can diminish the government's right of control.

We think, therefore, that the power of the Legislature is untrammelled by any possible impairment of the obligations of contracts within the meaning of the Federal or State Constitutions.

It is equally untrammelled, so far as the rights of the municipality are concerned, by the fourteenth amendment. If the ordinance and consent of 1900 can be said with any propriety of language, to have created a property right in the municipality, that right was subject to legislative control. *Hunter v. Pittsburgh*, 207 U. S. 161, 178.

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The next question is whether the Public Utilities Act of 1911 authorized the Commission to raise rates as well as to lower them. Of this there can be no doubt. The power is given by Section 16c, which authorizes the Commission after hearing upon notice by order in writing, to fix just and reasonable individual rates, wherever an existing rate is unjust, unreasonable, insufficient or unjustly discriminatory or preferential.

It is too plain to require statement that a rate may be unjust and unreasonable because too low as well as because too high; the statute aims to secure justice to both sides. If the words "just and reasonable" were not enough, the inclusion of the case where the existing rate is *insufficient* would remove all doubt. Injustice and unreasonableness due to an insufficient rate can only be corrected by raising it, and injustice due to discrimination or preference may require that one rate be raised or that the other rate be lowered in order to produce a rate that shall be just and reasonable. Only by adhering to the express language of Section 16c, can the result be reached that is set forth in Section 15, that the Board shall have general supervision and regulation of, jurisdiction and control over, all public utilities, and over their property, property rights, equipments, facilities, and franchises, so far as necessary to carry out the provisions of the act.

These general considerations bring us to the order made in this particular case. The Board failed to decide in express terms the question which the statute required them to decide, whether the rates were just and reasonable. Instead of deciding that question, they decided only that the rates were not confiscatory. In view of the decisions of the United States Supreme Court, we cannot understand how this result can be vindicated as a general proposition, but it is enough to say that the Board was not authorized to pass on that question. Its duty was to determine what rates were just and reasonable; a rate might well be unjust and unreasonable although not confiscatory. We have said that the Board failed to decide this question in express terms. It did, however, decide it by implication adversely to the municipality. It found that extensions of the system for which numerous applications had been made, were desirable, but that it was not reasonable and practicable

Collingswood Sewerage Co. v. Borough of Collingswood.

for the company in its present financial condition to make them. It therefore declined to order them and suggested municipal action which would make it possible for the company to obtain new capital. This amounted to turning over to the Borough a duty which the statute imposes on the Board. One of the objects meant to be secured was adequate and proper service for the public (not merely for those entitled to service with "present facilities") by order of the Board, including reasonable extensions where they will permit sufficient business to justify construction and maintenance and when the financial condition of the public utility reasonably warrants the original expenditure required. The Board in effect and by inference finds that the present service is not adequate, that extensions are reasonable and practicable, and that the financial condition of the company could be made to justify the expenditures and that new capital could be obtained for the purpose if the municipality would consent to a modification of rates. If this view is correct, the Board should have ordered the necessary modification of rates and not have shifted the responsibility to the municipality. What its findings may be when it considers the questions the statute calls upon it to solve, we cannot know. Its present order is not in accordance with the statute. It must therefore be set aside and the case remitted in order that there may be proper findings.

No costs will be allowed.

Appeal from the foregoing decision of the Supreme Court was taken to the Court of Errors and Appeals. At the time of publishing this volume the case is under review by the Court of Errors and Appeals.

Burlington Sewerage Co. v. City of Burlington.

NEW JERSEY SUPREME COURT.

November Term. No. 216.

BURLINGTON SEWERAGE COMPANY

v.

CITY OF BURLINGTON.

Per Curiam.

This case is controlled by the opinion in Collingswood Sewerage Co. v. Borough of Collingswood. The order is set aside and the case remitted in order that there may be proper findings. No costs will be allowed.

Appeal from the foregoing decision of the Supreme Court was taken to the Court of Errors and Appeals. At the time of publishing this volume the case is under review by the Court of Errors and Appeals.

NEW JERSEY SUPREME COURT.

November Term, 1917. No. 245.

MAYOR AND BOARD OF ALDERMEN
OF THE TOWN OF DOVER

v.

NEW JERSEY GAS AND ELECTRIC COMPANY.

Certiorari.

Before Justices Swayze, Trenchard and Minturn.

Mayor, &c., of Dover v. N. J. Gas and Electric Co.

King & Vogt, for prosecutor.

L. Edward Herrmann and Frank H. Sommer, for Board of Public Utility Commissioners.

George Whitefield Betts, Jr., and George C. Sprague, for New Jersey Gas and Electric Company.

Per Curiam.

The right of the Board of Public Utility Commissioners to authorize an increase of rates is sufficiently vindicated by the opinion in *Collingswood Sewerage Co. v. Borough of Collingswood*, just filed.

As to the effect of the increase of rates upon the price at which Dover may acquire the works, it is enough to say that Dover made the contract subject to the right of regulation of rates and must take the consequences just as the holders of stocks and bonds of the Public Service Gas Company had to take the consequences of the reduction of rates which was sustained by us and by the Court of Errors and Appeals in *Public Service Co. v. Public Utility Board*, 84 N. J. Law 463; affirmed, 87 N. J. Law 581 (at p. 597).

That it was correct to fix rates with reference to the present value of the property of the Gas and Electric Company, is settled by the decision of the Court of Errors and Appeals just cited, as well as by the decision of the United States Supreme Court in the *Minnesota Rate Cases* therein referred to.

Let the order be affirmed with costs.

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To ascertain the justice and reasonableness of rates requires detailed proof of the elements to be considered. *New Jersey Gas Company vs. Citizens Gas Company of Vineland and Citizens Gas Company of Landis Township—To increase rates*.....p. 711

A rate of \$3.50 per 1,000 cubic feet for gas would be in excess of the value of the service and because of decreasing number of customers would not afford a revenue anticipated. *Application of the Seashore Gas Company of Sea Isle City for increased rates, proposed to be effective on March 1st, 1918.*.....p. 797

Under ordinary conditions it is of prime public importance that the property of public utilities be maintained in condition to render effective service. In the present emergency the need is emphasized by the intimate relationship of continued effective operation of public utilities to continued efficient operation of war industries. The former is indispensable to the latter. Revenues must yield the funds which are to maintain property in condition to render such service. An increased charge is allowed entirely as a war emergency measure without passing upon the reasonableness of the rentals and dividends paid by the company or upon the reasonableness of the company's appropriations for general amortization. *Application of the Public Service Gas Company for increase in rates.*.....p. 809

RATES—RAILROAD COMPANIES.

In a proceeding to determine the question of the reasonableness of proposed increases in passenger rates, testimony was given and statements submitted as to revenues divided between passenger and freight and the revenue from passenger service was divided between strictly passenger revenue and that derived from other operations on passenger trains. Passenger revenue was divided between revenue from intrastate travel and revenue from the New Jersey portion of interstate travel. *In re increased rates for transportation of passengers between points in the State of New Jersey*p. 334

It is held to be a proper method on which to base conclusions in a proceeding involving proposed increase in passenger rates to take intrastate passenger revenue, the number of intrastate passenger miles for two months and assume that the percentages shown for these two months would hold throughout the year. *In re increased rates for transportation of passengers between points in the State of New Jersey*p. 334

When in the investigation of a proposed increase in passenger rates a deficit is shown from passenger traffic and from all traffic after paying interest charges it is not regarded as necessary to consider the value of the company's property. *In re increased rates for transportation of passengers between points in the State of New Jersey*p. 334

A petitioner is not injured when the Board, finding that a complaint of an unreasonable rate is not supported by the record, makes an independent study and states the result thereof in its decision. *Mountain Ice Company vs. Delaware, Lackawanna & Western Railroad Company*p. 645

RATES—STREET RAILWAYS.

Approval is given to an interurban street railway company to increase its rates, it appearing that the cost of construction approximately equals the utility's funded debt; that its revenues are not sufficient to pay operating expenses and interest on bonds and that the road has been economically conducted; it further appearing that the rate charged per mile by the company is less than rates charged by many interurban railroads which have increased their rates upon a general basis of 1.67 cents per mile to 2 cents per mile. *Application of Henry H. Parmelee, receiver North Jersey Rapid Transit Company, for approval of increase in rates*.....p. 303

The Board holds that under a decision of the Supreme Court it has no authority to approve an increased fare to be charged by a street railway where the fares have been fixed by ordinances of the municipality granting the company the right to operate. *Application of Northampton, Easton & Washington Traction Company for approval of increase in rates*.....p. 307

The latter decision of the Board was not upheld by the Supreme Court on appealp. 311

A street railway should be allowed to earn enough revenue to provide for reasonable operating expenses, for conducting its business, for current repairs and maintenance, for taxes, for annual depreciation accruing over and above current repairs and maintenance in order to preserve investment intact, and to provide a return on investment sufficient to command needed capital. Where the average earnings have been less than 5% per annum on the investment an increase in rates is allowed. *Proposed discontinuance by the Bridgeton & Millville Traction Company of the sale of tickets at a reduced rate*.....p. 598

A regulation by an electric railway that tickets for the transportation of school children sold at a reduced rate shall not be accepted before 8 o'clock a. m. or after 5 o'clock p. m. is reasonable. *Board of Education of Middlesex Borough vs. Public Service Railway Company*p. 648

Where school tickets have always been accepted in any fare zone to limit their use to a particular zone would involve an increase in an existing rate. *Board of Education of Middlesex Borough vs. Public Service Railway Company*.....p. 648

RATES—TELEPHONE COMPANIES.

The fact that a telephone company, while maintaining for a number of years a 6% dividend rate, was able to meet, out of surplus and earnings the heavy expenditure required because of a storm doing unprecedented damage and has since maintained its dividend at 6% indicates that material increases in rates would not be warranted to provide against the somewhat remote contingency of a storm of similar severity. *In re rates proposed by the Farmers Telephone Company*p. 105

It is urged by a telephone company proposing to increase its toll charges that trunk lines are used for prolonged conversation about unimportant matters. The Board holds it to be unnecessary to increase rates to all subscribers to prevent abuse by some of the service. If an undue use of trunk lines is permitted by parties conversing for a long time, resulting in the exclusion of other parties desiring to use the line, it would appear that this might be properly dealt with by the enforcement of a rule which would compel disconnection when the use of a line is being unduly prolonged, and refusal to connect the parties until others desiring to use the line have been afforded reasonable opportunity to do so. *In re rates proposed by the Farmers Telephone Company*.....p. 105

Rates which produce a return of less than 3% on the physical value of the property of a utility cannot be held to be excessive. *Inquiry as to the justice and reasonableness of rates of the Delaware & Atlantic Telegraph and Telephone Company*.....p. 608

In an investigation to determine the reasonableness of the rates charged by the New York Telephone Company a complete inventory was made of the physical property of the company in New Jersey. A conclusion formed as to the cost to reproduce new the physical property was based upon unit prices prevailing just prior to the war for property in existence up to the first of the year 1915, the use of the higher prices of 1915 for that year and the use of the still higher prices for 1916 for property added during 1915 and 1916 up to June 30th of 1916. *Inquiry as to the justice and reasonableness of rates of the New York Telephone Company*.....p. 618

In determining the base on which a return should be allowed from the fair value of the company's property new 13.4% is deducted for accrued depreciation. Additions are made for working capital including materials and supplies for preliminary organization and development and commercial cost of securing stations. Eight per cent. is held to be a proper allowance to afford a fair return on the reasonable value of the property. *Inquiry as to the justice and reasonableness of the rates of the New York Telephone Company*...p. 618

RATES—TEST OF REASONABLENESS OF.

A test as to the reasonableness of rates cannot be what rates other utilities operating under different conditions charge, but rather does the rate charged yield to the utility more than a reasonable return upon the fair value of its property operated with reasonable economy. *William Hanley vs. Point Pleasant Water Works Company*.....p. 578

RATES—WATER COMPANIES. See also MINIMUM CHARGE. See also MUNICIPALITIES for ruling on payment of charge for opening street.

A water company ordered to allow builders who desire to take water for building purposes the option of taking the same on a flat rate basis or through a meter. *Bradley Beach vs. Monmouth County Water Company*p. 36

- Charge of \$1 by a water company for turning on the water after it has been turned off at the request of a customer is a reasonable charge and permissible. *Bradley Beach vs. Monmouth County Water Company*p. 36
- A water company under obligation to supply water at a pressure of not less than 40 pounds per square inch supplied the same at a pressure of 80 pounds per square inch and claimed additional compensation for fire protection. *Held*, that a charge to cover cost of supplying water at a pressure 25 pounds in excess of franchise requirements is reasonable. *Bernards Township vs. Bernards Water Company*p. 46
- Complaint was made of excessive charge by a water company and hearing was asked for. Prior to the hearing payment of subsequently approved bills was tendered but refused. *Held*, that in view of the circumstances of the case, service should not be discontinued to the petitioner but the company should accept payment of the subsequently approved charges and the dispute should be settled in the court of law. *Syman Hirsch vs. Plainfield-Union Water Co.*...p. 96
- A sum is fixed which will afford a water company a rate of 7% on the base with reasonable allowances for depreciation and operating expenses. *In re hearing as to whether the existing schedule of rates of the Hackensack Water Company is just and reasonable*...p. 176
- To meet abnormal conditions a water company is allowed to increase temporarily its minimum charge to discontinue giving 10% prompt payment discount. A proposal to make a charge of 10% per annum to customers for whom a company installs street service connections is disapproved. *In re proposed increase in rates by the Proprietors of the Morris Aqueduct*.....p. 271
- The development period of a public utility does not depend entirely on the period of time during which it is building up its business but depends also upon the total amount of business done. The first few customers cannot be called upon to pay the entire operating expenses of a water company. *Application of the Maple Shade Water Company for approval of increased rates*.....p. 293
- In determining the reasonableness of the rates charged in Long Branch City by the Tintern Manor Water Company consideration must be given to the value of the company's entire property; the value of that portion required for service in the city; the financial results to the company, considering its business in the city, and the classification of expenses. *City of Long Branch vs. Tintern Manor Water Company*.....p. 470
- The exact results to a water company under any given state of facts may not necessarily determine the justice and reasonableness of the rates charged. Charges must not exceed the value of the service. *City of Long Branch vs. Tintern Manor Water Company*...p. 470

While a low rate may be allowed to a large consumer, all service should be in accordance with the regular schedule of rates so arranged to admit of universal application. A railroad company may not be treated as one customer for the aggregate of service supplied in two municipalities. Each service must be considered as that of a separate customer and be charged in accordance with the schedule. *City of Long Branch vs. Tintern Manor Water Company*p. 470

A water company not supplying satisfactory service denied permission to increase its rates was given such permission on re-hearing, it appearing that since the original hearing substantial sums have been spent to improve the service. *Application of Clayton-Glassboro Water Company for the approval of a new schedule of rates—Re-hearing*.....p. 731

A minimum charge of \$3 per quarter, payable in advance, is allowed applicable to all customers whether charged on metered or fixture basis. *Application of Clayton-Glassboro Water Company for the approval of a new schedule of rates—Re-hearing*.....p. 731

For water for fire protection a fixed charge per inch diameter per foot of mains is allowed plus \$6 per annum for each hydrant in service and \$7.50 for each hydrant added in the future. *Application of the Clayton-Glassboro Water Company for approval of a new schedule of rates—Re-hearing*.....p. 731

At a seasonal resort much the greater part of the capital charges and overhead expenses which accrue throughout the year must be met by the amounts collected for the service given during the seasonal period. *William Hanley vs. The Point Pleasant Water Works Company*p. 578

SECURITIES.

In considering an application for approval of a merger and consolidation and of the issuance of securities the Board refuses to approve securities, which approval, if given, would result in refunding securities which would not have been approved originally. *Application of the Millville Gas Light Company et al for approval of merger and consolidation, etc.*.....p. 296

A company formed by merger and consolidation of other utilities and proposing to issue securities is required to set up a suspense account to cover the amount of debt, discount and expense; same to be written off from earnings during the period of the bonds. *Application of the Millville Gas Light Company et al. for approval, etc.*.....p. 296

Application is made for approval of issues of certificates including \$8,000 par value of capital stock "For promotion, engineering and general supervision for the past 3 years and 3 months." Approval of this item was withheld in the absence of satisfactory testimony indicating what allowances should be charged against capital. *Application of the Butler Water Company for approval of issue of \$5,000 bonds and \$10,000 stock*.....p. 318

- Application is made for approval of a mortgage and the issuance of \$80,000 par value of bonds. *Held*, that conservative financing would limit the amount of bonds to be outstanding in connection with property now in existence and not exceeding \$60,000. If an issue of \$80,000 par value bonds is approved, the amount of \$20,000 should be amortized within the life of the issue. *Lambertville Public Service Company petition for approval of a mortgage and the issue of \$80,000 in bonds*.....p. 246
- A water company formed through the merger and consolidation of two companies acquired \$25,337.50 par value of the capital stock of one of the companies. The application of the proceeds from the sale of the acquired stock to the payment of a dividend declared out of surplus will result under the circumstances in capitalizing, through an issue of stock, expenditures for extensions made out of earnings and therefore is a proper purpose for which stock may be issued. *New Jersey Water Service Company petition for approval of sale of \$25,300 par value of treasury stock*.....p. 254
- In considering an application of an issuance of bonds and preferred stock the Board holds that in determining the value of the property the application of excessive prices due to abnormal conditions should not be allowed. *Application of the Jersey Central Traction Company for approval of a mortgage and the issuance of bonds*.....p. 266
- Application is made for approval of an issue of bonds in the amount of \$112,000. It appears that the company making the application is not able to fully meet its interest charges. The Board is unwilling to approve any issue of bonds which would bring about such a great disparity between the amount of the company's bonds and the amount of its stock outstanding. *Application of the Hillcrest Water Company for approval of a mortgage for \$150,000 and issue of bonds thereunder*.....p. 280
- Application is made by an electric utility for approval of mortgage in the amount of \$75,000 and the issuance of bonds thereunder in the amount of \$41,000. The present value of the plant is found to be \$41,936. Approval is given to the mortgage and to the issuance of bonds in the amount of \$36,000, of which \$10,000 is to be issued par for par for outstanding bonds and the bonds to be issued and sold on such basis as will pay all the outstanding debts of the company. *Application of Electric Light and Power Company of Hightstown for approval of mortgage and issue of bonds*.....p. 283
- Approval is given to the proposed issuance by a gas company of \$385,000 of bonds for refunding a like amount of bonds of subsidiary companies, the bond discount to be amortized during the life of the bonds. *Application of the Easton Gas Works for approval of mortgage and issue of bonds and stock*.....p. 287

Where it is proposed to place against the capital account of a public utility certain charges for services rendered, the Board holds that part of the amount would be charged to operating account. *Application of the Butler Water Company for approval of issue of \$5,000 bonds and \$10,000 stock*.....p. 547

Application is made by a water company for approval of an issue of \$125,000 capital stock, it being claimed that this represents assets of the company against which securities have not been issued. *Application of the Riverton & Palmyra Water Company for permission to issue \$125,000 of capital stock as a stock dividend*p. 586

Upon finding that the cost new of the property would be \$190,640, accrued depreciation \$38,128, leaving the present value as a basis for stock issue of \$152,512, and that stock has been heretofore issued and is outstanding to the amount of \$125,000, approval is given for an issue of \$25,000 additional stock to reimburse the company for additions and betterments not capitalized, the company's net revenue appearing to be sufficient to pay a reasonable dividend on a total stock issue of \$150,000. *Application of the Riverton & Palmyra Water Company for permission to issue \$125,000 of capital stock as a stock dividend*.....p. 586

Approval is given to mortgage as security of bonds in the amount of \$50,000 and the issuance thereunder of bonds in the amount of \$20,000 at par for the purpose of retiring outstanding bonds in a similar amount upon condition that the company set aside a specific sum each year and carry this amount under the proper account on its books. *Application of the Clinton Water and Water Supply Company for approval of mortgage and issue of bonds thereunder*...p 606

Where it is proposed by an electric railway company to issue income debenture bonds with interest not to exceed 5% per annum, said bonds to retire second mortgage 5% bonds, and it appearing that the proposed plan will be in no manner prejudicial to the public and that the rights of no bondholder will be affected without his consent, the application is approved. *Application of the Morris County Traction Company for authority to issue income debenture bonds*p. 659

Stock dividends should be based upon the actual cost of the property, without any allowance for intangible values, decreased by accrued depreciation. A utility should have part of its property represented by free surplus. Fifteen per cent. is deducted for this purpose from a valuation of \$41,910, leaving \$38,000 to be represented by capital stock, of which par value of \$23,000 has been approved. Permission is given to issue \$15,000 additional stock, of which \$8,000 may be used in payment of a stock dividend. *Application of Toms River Electric Company for approval of an issue of \$10,000 capital stock for treasury use and \$20,000 of its capital stock to be issued as a stock dividend*p. 682

SERVICE—CONNECTIONS TO.

In making connections to water mains, service line from main to curb shall be furnished and placed by the company at its expense; cost of remainder to be paid by the owner. *In re establishing standards and regulations to be followed by utilities supplying water for public use*p. 27

When connection is made to a water main of a service pipe through which service is not immediately desired, the applicant shall bear the entire expense of tapping the main, laying and maintaining the service pipes, couplings and connections, but shall be entitled to a refund for such part as the company is required to pay for when regular service is begun. *In re establishing standards and regulations to be followed by utilities supplying water for public use*.....p. 27

A water company should make its own arrangements for repairing service pipes where a user of water employed a plumber to stop a leak which appeared to be in the street near the company's main. *Mrs. J. C. Atwater vs. Montclair Water Company*.....p. 52

SERVICE—ELECTRIC COMPANIES.

On complaint of refusal of an electric company to supply service, it was found that the cost would be too great to justify ordering the necessary extension. Reasonable terms upon which the extension should be made are fixed. *F. J. Crick vs. Rockland Electric Co.*....p. 92

The question whether poles are maintained lawfully by a public utility along a highway is not within the jurisdiction of the Board to determine. *James T. Ackerman vs. Public Service Electric Company*p. 655

Where it is alleged that a pole line and the wires thereon are not properly maintained and the application is not adequately supported by evidence, the complaint is dismissed. *James T. Ackerman vs. Public Service Electric Company*.....p. 655

SERVICE—GAS COMPANIES.

A gas company is directed to file plans to include additional holder capacity, the coupling of dead ends to secure circulation, the installation of ordinary district governors and a method by which coal and water gas may be mixed and result in uniform quality of gas furnished under a range of pressures that will comply with the Board's requirements. *City of Perth Amboy vs. Perth Amboy Gas Light Company*p. 54

Terms are fixed upon which a gas company will be ordered to extend its facilities to supply service. *City of South Amboy vs. Public Service Gas Co.*.....p. 73

Gas of 600 B. T. U. value is not sufficiently rich to produce trouble from carbonization; nor is it so rich as to require for ordinary uses the delicate adjustment of fixtures which gas of higher heating value requires. *Application of Bridgeton Gas Light Company et al for modification of Board's Rule No. IX, fixing standards for gas*.....p. 532

If under the present abnormal conditions an existing rate is no longer just and reasonable, the situation is not to be met by substituting for a proper and adequate service a service which may be inadequate, but by a specific and direct application for sufficient rates, on which application all of the pertinent facts affecting the question of a just and reasonable rate may be considered. *Application of Bridgeton Gas Light Company et al for modification of Board's Rule No. IX. fixing standards for gas*.....p. 532

Each extension of service may have its development period just as the company as a whole may have such a period. During the development period it is the policy to compute interest on an ordinary interest basis. *Township of Florence vs. Public Service Gas Co.*...p. 709

SERVICE.—RAILROADS. See also STATIONS.—RAILROADS.

Where it is necessary to facilitate the movement of freight to serve the country in time of emergency, mere convenience must give way in those respects which governmental agencies deem most essential. Material reductions in passenger train service held under these circumstances to be proper. *In re withdrawal from service of passenger trains by the Erie Railroad Company and the New York, Susquehanna & Western Railroad Company*.....p. 248

A large number of people eager to reach their destination should not be inconvenienced and delayed by imposing an additional stop for special summer excursion trains in order that a few persons occasionally desiring to travel on such trains may be accommodated. *Horace J. Malott vs. Wildwood & Delaware Bay Short Line Railroad Co. and the Atlantic City Railroad Co.—In re inadequate service*p. 312

The statute prescribing the number of men to constitute train crews is a legislative direction that freight trains containing more than 30 cars shall have a crew of 6 men unless the Board finds that fewer men can operate the trains with safety to the public and the employees of the railroad. *Application of the Central Railroad Company of New Jersey for permission to decrease the number of men constituting the train crews operating certain trains covered by the Full Crew Law*.....p. 567

If it is sought to deal with trains by classes, the proof should be satisfactory that the characteristics of such classes are substantially uniform and applicable to all trains within the class. *Application of the Central Railroad Company of New Jersey for permission to decrease the number of men constituting the train crews operating certain trains covered by the Full Crew Law*.....p. 567

Old discarded cars do not afford, under ordinary circumstances, proper station facilities. *Borough of Hasbrouck Heights vs. Erie Railroad Company and New York & New Jersey R. R. Co.*.....p. 685

SERVICE—STREET RAILWAYS.

The Board would not be warranted in requiring the operation of a street railway where such operation has been discontinued and it appears that for many years the company has operated at a loss; that operation if resumed would not pay operating expenses and taxes and that to place the rolling stock in condition for operation would require the expenditure of large sums of money, the street railway being a small system and depending entirely on local business for its revenue. *In re failure to operate Cape May, Delaware Bay & Sewell's Point Railroad and Ocean Street Passenger Railway*p. 523

Application is made for approval of a trackage agreement providing for the operation over the Morris Railroad Company of cars of the Morris Traction Company. *Held*, when the traction company is to be credited with all revenues from operation it should bear directly all operating expenses and the rental should not include operating expenses of the railroad company. The two roads being practically one cannot be regarded as two separate and distinct properties. *Application of Morris County Traction Company for approval of a trackage agreement, dated October 2d, 1913, between the Morris Railroad Company and the Morris County Traction Company*.....p. 690

Where it appears that the elimination of certain trips by a street railway will result in an appreciable saving of fuel; that the trips to be discontinued are within the non-rush periods and that an emergency exists making necessary conservation of fuel and labor. the elimination of the trips is allowed. *Application of Morris County Traction Company to change schedule on line from Springfield Junction to Elizabeth*.....p. 727

SERVICE—TELEPHONE COMPANIES.

The establishment of a hard and fast line as the division between telephone service zones is unnecessary and unwarranted. The exigencies of service may require a certain limited amount of overlapping in order that the service furnished may be of the greatest value. *C. Craig Tallman et al vs. The Delaware & Atlantic Telegraph and Telephone Company*.....p. 101

SERVICE—WATER COMPANIES. *See also* COMPETITION, METERS and SERVICE—CONNECTIONS TO.

In order that a water company may be assured of sufficient business to justify the construction and maintenance of an extension of its service, petitioners for such service extension should furnish a guarantee of an annual income from the consumers residing along the line covering a period of five years. *John Johnstone vs. Hackensack Water Company*.....p. 3

At a property used as a boarding house where water is supplied on a flat rate basis and many fixtures are in use, it is held that unusual conditions prevail making requirement of metered service reasonable. *George A. Marr vs. Point Pleasant Water Works Co.*...p. 8

Water companies required to flush hydrants and dead ends of mains, make inspections of equipment and facilities, keep records of interruptions to service, maintain pressure gauges and facilities for testing meters. *In re establishing standards and regulations, to be followed by utilities supplying water for public use*.....p. 14

Bills for service on flat rate basis by water companies may be rendered annually, semi-annually or quarterly. *In re establishing standards and regulations, to be followed by utilities supplying water for public use*.....p. 14

A water company has a right to discontinue service to a house from which water is being supplied to an adjoining lot for building purposes, even though the water passes through the meter. *Bradley Beach vs. Monmouth County Water Co.*.....p. 36

Water company is advised of changes and improvements required to be made to increase pressures. *In re hearing with regard to water pressure supplied in Glassboro by the Clayton Glassboro Water Company*p. 65

On a complaint of insufficient pressure, the Board fixes minimum pressures for different municipalities served by a water company and decides that additions and extensions to the company's pumping plant, transmission system and distribution main should be made as will result in increase pressures to the limits fixed. *In re investigation by the Board of the service afforded by the Hackensack Water Company*.....p. 131

The duty of a water company is fulfilled so far as purity is concerned when it treats the water in accordance with the best modern methods. *In re investigation by the Board of the service afforded by the Hackensack Water Company*.....p. 131

A general notice printed on a bill that service will be discontinued if the bill is not paid by a certain date is insufficient notice. Special notice should be given of intention to discontinue service. *In re investigation by the Board of the service afforded by the Hackensack Water Company*p. 131

Extensions of service by a water company into territory beyond that which is fairly well built up can only be made under ordinary conditions, when they are self supporting; it is not unreasonable for a water company to require as a pre-requisite to the making of an extension an assurance of reasonable revenue. *In re investigation by the Board of the service afforded by the Hackensack Water Company*p. 131

A user of water agreed to guarantee a water company an annual revenue of 10 cents per lineal foot of pipe laid to afford him service. Later 153 feet of extension was used by the company to improve its service. *Held*: A deduction should be made in the guarantee corresponding with the length of the pipe used by the company. *B. J. Whittaker vs. Hackensack Water Company*.....p. 78

- The duty imposed by law is to furnish safe, adequate and proper service and it is for such service only that the company is entitled to fair and reasonable rates yielding fair returns to the owners of the property upon their investment therein. *Application of the Clayton-Glassboro Water Company for approval of new schedule of rates*p. 90
- In passing upon a petition for an order requiring a water company to extend its facilities the cost of the extension is estimated based on existing prices. *Board of Education of West Long Branch et al vs. Tintern Manor Water Company*.....p. 550
- Where municipal bodies or individuals insist upon an extension of facilities when costs are excessive and unusual, they must pay the increase necessary to cover the same. *Board of Education of West Long Branch et al vs. Tintern Manor Water Company*.....p. 550
- In considering the question of extension of facilities by a water utility, it is held that the company should receive 6% return on the investment and 2% for depreciation and taxes with a further allowance of 5 cents per lineal foot for cost of operation and proportional share of plant to be borne by new consumers. *J. Chapman vs. Pennsgrove Water Supply Co.*.....p. 575
- An order directing a water company to extend its facilities to supply service should require only such extension as will furnish "Safe, adequate and proper service" under the conditions now existing or which may be fairly presumed to exist during reasonable period of ordinary life in service of such extension. *Board of Education of West Long Branch et al vs. Tintern Manor Water Company—Rehearing*p. 759
- Petition that a water company be ordered to lay a four-inch instead of six-inch main is denied, where it is apparent that the four-inch main would be inadequate for purpose of fire protection. *Board of Education of West Long Branch et al vs. Tintern Manor Water Company—Rehearing*p. 759
- In making service connections to a water main the municipal charge, if any, for opening the street should be paid by the applicant. *Dr. Albert Pittis vs. Plainfield-Union Water Company*.....p. 773
- A municipal charge for permission to open the street does not include the charge for excavation in or repaving the street and is intended to cover only the clerical fee for recording the permit. *Dr. Albert Pittis vs. Plainfield-Union Water Company*.....p. 773
- Where a city charged a customer for replacing a pavement under which service pipes were laid to supply service immediately desired, it is held that the water company should pay the charge. *Dr. Albert Pittis vs. Plainfield-Union Water Company*.....p. 773

Where a charge applies to repairs and replacements to service not immediately desired, the complainant should pay the same. *Dr. Albert Pittis vs. Plainfield-Union Water Company*.....p. 773

The unpaid bill of a contractor with the Board of Education for building a school cannot be regarded as a bill owing by the Board of Education and a water company would not be justified in refusing to supply water on the application of the Board of Education because of the unpaid bill. *Board of Education of Town of Morristown vs. Proprietors of the Morris Aqueduct*.....p. 780

STATIONS. See RAILROADS—STATIONS.

STOCK DIVIDENDS. See SECURITIES.

TAXES.

A sewer company is permitted to file a schedule of rates with increases sufficient to cover additional taxes imposed. *Application of the Burlington Sewerage Company for rehearing on the question of approval by the Board of a new schedule of rates*.....p. 81

TELEPHONE COMPANIES. See SERVICE—TELEPHONE COMPANIES.

TRUCKAGE AGREEMENT.

A truckage agreement between a traction company and a railroad company providing for payment to the railroad company of a disproportionate share of the earnings of the whole line should not be approved. *Application of the Morris County Traction Company for approval of a truckage agreement dated October 2d, 1913, between the Morris Railroad Company and the Morris County Traction Company*p. 690

VALUATION.

In the valuation of a public utility for rate making purposes, equitable treatment requires an allowance for certain elements of intangible cost in addition to the values of the physical property. *Hearing as to whether the existing schedule of rates of the Hackensack Water Company is just and reasonable*.....p. 176

WATER COMPANIES. See also METERS, RATES—WATER COMPANIES and SERVICE—WATER COMPANIES.

Rules and regulations to be observed by water companies applying to identification of property inspections, keeping of records, ownership and tests of meters and billing for service, adopted and made part of formal order of the Board. *In re establishing standards and regulations, to be followed by utilities supplying water for public use*p. 14

The cost of water for fire protection service should be met by charges based on the proportion of plant and system required for fire protection, exclusive of hydrants, and an additional charge for each hydrant. *In re hearing as to whether the existing schedule of rates of the Hackensack Water Company is just and reasonable*..p. 176

The costs for domestic, industrial and public consumers should be met by (1) a fixed service charge, payable whether water is used or not, and (2) a charge covering proportional or variable costs apportioned on the basis of the quantity of water consumed. Fire service charges and fixed service charges for domestic, industrial and public consumers may be taken as uniform in all districts throughout the entire system. *In re hearing as to whether the existing schedule of rates of the Hackensack Water Company is just and reasonable*.....p. 176

A fixed charge found reasonable for a water company to make is based upon the size of a meter required to furnish service for the given property. *In re hearing as to whether the existing schedule of rates of the Hackensack Water Company is just and reasonable*..p. 176

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